

Pertanika Journal of
**SOCIAL SCIENCES
& HUMANITIES**

JSSH

VOL. 33 (4) SEP. 2025



PERTANIKA
JOURNALS

A scientific journal published by Universiti Putra Malaysia Press

PERTANIKA JOURNAL OF SOCIAL SCIENCES & HUMANITIES

About the Journal

Overview

Pertanika Journal of Social Sciences & Humanities is the official journal of Universiti Putra Malaysia. It is an open-access online scientific journal. It publishes original scientific outputs. It neither accepts nor commissions third party content.

Recognised internationally as the leading peer-reviewed interdisciplinary journal devoted to the publication of original papers, it serves as a forum for practical approaches to improve quality in issues pertaining to social and behavioural sciences as well as the humanities.

Pertanika Journal of Social Sciences & Humanities currently publishes 6 issues a year (*March, April, June, September, October and December*) periodical that considers for publication original articles as per its scope. The journal publishes in **English** as well as in **Bahasa Malaysia** and it is open for submission by authors from all over the world.

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Pertanika Journal of Social Sciences & Humanities aims to develop as a pioneer journal for the social sciences with a focus on emerging issues pertaining to the social and behavioural sciences as well as the humanities. Areas relevant to the scope of the journal include Social Sciences—architecture and habitat, consumer and family economics, consumer law, education, media and communication studies, political sciences and public policy, population studies, psychology, sociology, and tourism; Humanities—arts and culture, dance, language and linguistics, literature, music, philosophy, and sports.

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Pertanika Journal of Social Sciences & Humanities was founded in 1993 and focuses on research in social and behavioural sciences as well as the humanities and its related fields.

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Pertanika Journal of Social Sciences and Humanities: e-ISSN 2231-8534 (Online).

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The *Introduction* explains the scope and objective of the study in the light of current knowledge on the subject; the *Materials and Methods* describes how the study was conducted; the *Results* section reports what was found in the study; and the *Discussion* section explains meaning and significance of the results and provides suggestions for future directions of research. The manuscript must be prepared according to the journal's **Instruction to Authors** (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

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As articles are double-blind reviewed, material that may identify authorship of the paper should be placed only on page 2 as described in the first-4-page format in *Pertanika*'s Instruction to Authors (http://www.pertanika.upm.edu.my/Resources/regular_issues/Regular_Issues_Instructions_to_Authors.pdf).

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Peer reviewers are experts chosen by journal editors to provide written assessment of the **strengths** and **weaknesses** of written research, with the aim of improving the reporting of research and identifying the most appropriate and highest quality material for the journal.

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Comments to authors are about the appropriateness and adequacy of the theoretical or conceptual framework, literature review, method, results and discussion, and conclusions. Reviewers often include suggestions for strengthening of the manuscript. Comments to the editor are in the nature of the significance of the work and its potential contribution to the research field.

3. The Editor-in-Chief examines the review reports and decides whether to accept or reject the manuscript, invite the authors to revise and resubmit the manuscript, or seek additional review reports. In rare instances, the manuscript is accepted with almost no revision. Almost without exception, reviewers' comments (to the authors) are forwarded to the

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 5. The Chief Executive Editor sends the revised manuscript out for re-review. Typically, at least 1 of the original reviewers will be asked to examine the article.
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 8. The editorial office ensures that the manuscript adheres to the correct style (in-text citations, the reference list, and tables are typical areas of concern, clarity, and grammar). The authors are asked to respond to any minor queries by the editorial office. Following these corrections, page proofs are mailed to the corresponding authors for their final approval. At this point, **only essential changes are accepted**. Finally, the manuscript appears in the pages of the journal and is posted on-line.

Pertanika Journal of
**SOCIAL SCIENCES
& HUMANITIES**

Vol. 33 (4) Sep. 2025



A scientific journal published by Universiti Putra Malaysia Press

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UPM PRESS

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Foreword

Welcome to the fourth issue of 2025 for the *Pertanika Journal of Social Sciences and Humanities (PJSSH)*!

PJSSH is an open-access journal for studies in the field of Social Sciences and Humanities published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 17 articles; five review articles; and the rest are regular articles. The authors of these articles come from different countries namely China, Indonesia, Jordan, Malaysia, Nigeria, Taiwan and Vietnam.

Nga Thi Tuyet Phan and colleagues investigate the Vietnamese University Students' Research Anxiety and Perceptions of Supervisor Support. This study examined differences in research anxiety levels among undergraduate students as well as the correlation between research anxiety and perceived supervisor support. Three hundred and ninety undergraduates completed online questionnaire surveys, and 20 participated in focus group discussions. A weak, positive relationship between anxiety and perceived support was identified, with qualitative data offering further insights into individual experiences and perceptions. The detailed information of this article is presented on page 1569.

A regular article titled "Examining the Psychometric Properties of the Westside Test Anxiety Scale Using the Rasch Model: Evidence from Nigerian Undergraduates" sought to investigate the psychometric qualities of the 10-item WTAS in a sample of 300 undergraduates at a public university in Nigeria. The results reveal indicated satisfactory outcomes for most of the criteria, including DIF, construct validity, and reliability evidence. However, it was discovered that the WTAS items were unable to target responders with higher abilities at the top of the assessed instrument on the Wright map. The detailed information of this article is presented on page 1661.

An article entitled "Sacred Symbolism in the Ritual Healing Ceremony of Magombok: An Analysis of the Panangsang Dance" explores gestures within the Panangsang dance to unravel the intricate tapestry of symbolic meanings. The findings reveal seven animal-inspired movements in the dance, including representations of the Eagle, Rooster, Stingray, Turtle, Spider, Python, and Cobra.

These zoomorphic gestures symbolically convey that the patient is afflicted by sorcery or ancestral curses. Further details of the study can be found on page 1703.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent *Pertanika*'s stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers and Editorial Board Members of *PJSSH*, who have made this issue possible.

PJSSH is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

Editor-in-Chief

Puvaneswaran Kunasekaran

Impact of Cyberbullying on Depression Among College Students: Social Anxiety as a Mediator and Gender as a Moderator

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ABSTRACT

In light of technological development, cyberbullying is a common behavior among young people that hurts everyone involved. Cyberbullying remains a major social issue that needs to be resolved in many countries, including Jordan. It has negative effects on the mental health of Jordanian youth, such as depression and social anxiety; therefore, this study aims to examine the relationship between cyberbullying and depression in the Jordanian context. It also considers social anxiety as a mediator and gender as a moderator in the relationship between the variables. Questionnaires were distributed to 220 Jordanian university students using a purposive sampling method, and PLS-SEM was employed to examine the direct and indirect associations between variables. The results showed that cyberbullying is directly linked to depression. Social anxiety is also linked to depression. Social anxiety is a mediating variable in the effects of cyberbullying on depression. The results of this study indicate that gender does not affect the relationship between cyberbullying and depression. The Transactional Model of Stress and Coping may offer a theoretical framework in the domain of cyberbullying and suggest the implementation of additional interventions aimed at mitigating cyberbullying and its adverse impact on individuals. This study concludes that cyberbullying increases social anxiety and depression. In addition, insights into the mechanism underlying the impact of cyberbullying on adult depression were provided, and suggestions were offered to mitigate cyberbullying and depression.

ARTICLE INFO

Article history:

Received: 28 April 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.01>

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INTRODUCTION

The issue of cyberbullying has garnered significant attention in recent years, with a surge in research output (Xia et al., 2023). According to the National Center for Educational Statistics (2019), cyberbullying can be defined as “deliberate and persistent harm committed through the use of smartphones, computers, and other electronic devices (Hinduja & Patchin, 2014). This phenomenon, particularly on social networking sites, has been the subject of a growing body of literature focusing on the relationships between perpetrators, victims, and bystanders (Chan et al., 2021). Despite the rapid growth in research, the field remains in its formative phase, with several key challenges and research gaps (Strohmeier & Gradinger, 2022). Cyberbullying has become an increasingly prevalent issue in society, particularly among young people. It refers to using electronic communication tools to deliberately and repeatedly harm, harass, or intimidate someone. Cyberbullying has several severe effects on mental health, ranging from depression and anxiety to suicidal thoughts and self-harming.

In today’s age, social media and technology are important tools for enabling and preventing cyberbullying. Given the anonymity and lack of physical contact offered by platforms such as Facebook, Instagram, TikTok, and WhatsApp, people are more likely to engage in hazardous behaviors online. The ability to spread harmful content to a wide audience and the viral nature of posts intensify the emotional distress inflicted

on victims. According to studies, offenders are frequently encouraged by the anonymity offered by Internet platforms, leading to increased aggressive behavior (Aboujaoude et al., 2015; Eneizat et al., 2025). Furthermore, researchers have highlighted the global effects of cyberbullying on mental health (Collantes et al., 2020; Squillace et al., 2023). Cyberbullying victims are likely to suffer from mental health issues, such as depression and social anxiety (Xia et al., 2023). According to the World Health Organization (2017), depression is “a common mental disorder that includes prolonged sadness, loss of interest or pleasure, feelings of guilt or inadequate worth, trouble sleeping or appetite, and inadequate concentration” (p. 6). In contrast, “social anxiety is an intense and pervasive fear of interactions with others in which humiliation and embarrassment may take place,” according to The American Psychiatric Association (2013, p. 202).

Consequently, it is essential to note that the outcomes of cyberbullying are not limited to the victims only; instead, they can also have detrimental influences on the mental health of perpetrators, bystanders, and even the community as a whole. Additionally, cyber victims and cyberbullies report higher levels of stress, depression, and anxiety, as well as more social difficulties (Martínez-Monteagudo et al., 2020). For instance, bystanders may experience guilt, anxiety, and helplessness, whereas perpetrators may experience guilt, shame, and regret (Wright et al., 2018). These emotions can lead to increased levels of depression and social anxiety (Zhao et al., 2023).

In general, cyberbullying has been shown to have long-term repercussions on mental health, including the development of post-traumatic stress disorder and other mental health conditions, such as social anxiety and depression (Wang et al., 2019). Similarly, cyberbullying can have both social and emotional effects on victims. Victims may feel isolated, rejected, and powerless, leading to a decreased sense of belonging and self-worth (Collantes et al., 2020). They may also experience difficulties in forming and maintaining online and offline relationships (Collantes et al., 2020). However, the number of cases of cyberbullying is increasing in many countries. For instance, in Jordan, a report by UNICEF showed that cyberbullying is a serious problem faced by all individuals in Jordanian society (McKeever, 2020). Similarly, some studies have indicated that cyberbullying is a widespread issue among Jordanian university students (Awawdeh et al., 2023). According to Awawdeh et al. (2023), due to the scarcity of studies that have focused on the phenomenon of cyberbullying in the Jordanian context, there is an urgent need to study the impact of cyberbullying on the psychological health of university students. In addition, recent studies in Jordan have focused on adolescents (Bani-Salameh, 2023), and there is still a need to conduct research on adults (Awawdeh et al., 2023).

Conversely, there is disagreement among existing meta-analyses regarding the relationship between cyberbullying and depression (Hu et al., 2021). Therefore, previous studies have examined the role of social anxiety and gender as mediating

and moderating variables. Social anxiety and gender differences (Gao et al., 2021) play an essential role in the relationship between cyberbullying and depression. For example, individuals with high levels of social anxiety experienced a more substantial effect of cyberbullying on depression. In addition, examining gender roles in the association between bullying and depression is important because there are differences in these relationships between males and females (Lahav-Kadmiel & Brunstein-Klomek, 2018). Consequently, this study seeks to fill these gaps in the literature. This research has the specific objective of contributing to the existing body of empirical research on the correlation between cyberbullying and depression in order to ascertain two key aspects: (1) the significance and scale of the impact of cyberbullying on depression, and (2) it is postulated that there exists a moderate effect influenced by social anxiety, as well as a moderate effect influenced by gender.

LITERATURE REVIEW

Theoretical Framework

The key frameworks that enhance understanding of the relationship between cyberbullying, social anxiety, and depression are social cognitive theory (SCT) and ecological systems theory (EST).

Social Cognitive Theory

According to Bandura's SCT, which was developed in 1986, behavioral patterns are explained by the interaction between external

settings and personal characteristics. Social anxiety and depression would increase the likelihood of psychological injuries due to cyberbullying. Such actions are encouraged by anonymity and lack of accountability in the digital sphere, which is a form of environmental influence. Victims of cyberbullying internalize the consequences or even imitate such behaviors through observational learning. Maladaptive coping strategies brought on by frequent exposure to cyberbullying result in behavioral patterns that exacerbate social anxiety and depressive symptoms. This paradigm underlines the necessity of addressing both personal vulnerabilities and environmental factors to lessen the deleterious effects of cyberbullying, calling for measures that strengthen resilience and support positive online behaviors.

Ecological Systems Theory

Thus, Bronfenbrenner's EST (1979) captures the additional layers of variables within the individual, family, social support, and social ecology that impact such developmental growth and cyberbullying reactions in children. Within the microsystem, a person's immediate experience of cyberbullying is influenced by their interpersonal interactions with their family and peers. Victims are more susceptible to depression and social anxiety when they do not have helpful relationships with others. Interactions across many settings, such as home and school, are part of the mesosystem and might influence how cyberbullying is dealt with. For instance, a strong school

policy may lessen the consequences of cyberbullying. Cyberbullying practices may be normalized or made worse by ecosystems, which refers to more indirect impacts at the larger societal level, such as media portrayal and cultural views.

The patriarchal cultural and societal standards that both structure gendered experiences of cyberbullying and intensify its psychological effects on women are part of the macro systems. Since the chronosystem deals with dynamic shifts in social attitudes and actions, as well as the resulting changes in prevalence and influence across time, it incorporates a temporal component. When these three levels are integrated, it becomes clear that cyberbullying calls for comprehensive intervention solutions that consider the needs of both people and cultural and societal orientations.

Cultural Influences and Cyberbullying in the Jordanian Context

Culture is a key element in shaping individuals' experiences and perceptions of cyberbullying and its related psychological impact. In Jordan, cultural influences are deeply rooted in a sociocultural environment that is collectivist, where values such as family honor, reputation, and community relationships are held with utmost importance (Alzoubi et al., 2022). Cultural norms influence individuals' responses to cyberbullying and their mental health. Research indicates that, in Middle Eastern societies, including Jordan, cyberbullying victims are less likely to report cyberbullying incidents because

of concerns about family reputation, fear, and social stigmas associated with cultural contexts. As a result, it exerts emotional and psychological pressure on victims, leading them to social anxiety and depression (Abol Fotouh et al., 2021). In addition, gendered experiences of cyberbullying may be influenced by Jordan's patriarchal values. According to previous studies, when women are subjected to strict expectations of behavior and modesty, cyberbullying may have greater adverse psychological impacts (Al-Nsour et al., 2022). Given that cyberbullying sometimes entails cultural humiliation of public exposure or perceived wrongdoing, female victims may experience higher levels of social depression and anxiety.

Cyberbullying and Depression

A study that analyzed the prevalence of cyberbullying further elucidated that depression is a prevailing psychological disorder among college students, showing a disconcertingly heightened occurrence (Alrajeh et al., 2021). Scholars have asserted that individuals who engage in deviant Internet behaviors are typical, which directly impacts the well-being of the online population (Alrajeh et al., 2021; Pang et al., 2022). As a result, cyberbullying has become a pressing problem with increased internet use (Pang et al., 2022). A study conducted by Wang et al. (2019) stated that people who experienced cyberbullying have increased feelings of despair and loneliness, and these two elements are considered risk factors for depression. Similarly, to support this argument, Agus et al. (2021)

and Collantes et al. (2020) discovered a link between cyberbullying and depression.

Cyberbullying is a form of aggression that occurs through technology (Ćorić & Kaštelan, 2020). It involves deliberate and repetitive actions aimed at intimidating, embarrassing, or harming individuals perceived as weaker or more vulnerable (Heiman et al., 2015). Cyberbullying can take various forms, including sending abusive messages, spreading false information, and excluding individuals from social circles (Rao et al., 2018). Therefore, it is a complex and dynamic phenomenon that can have severe consequences for the mental health and behavioral changes of those involved (Sonone et al., 2021). In contrast to traditional bullying, cyberbullying endures for an extended duration and exposes the target to heightened danger as it continues to reach the victim without any time or place constraints. Additionally, it has been observed that the prevalence of cyberbullying is a growing concern that requires early detection and preventive strategies. Factors such as self-esteem can influence individuals' engagement in cyberbullying. Efforts to combat cyberbullying involve proactive strategies at the school and family levels (Sorrentino et al., 2023). Research has shown various negative consequences of cyberbullying on targets, including increased depression, decreased self-esteem, and suicide attempts (Agus et al., 2021).

In addition, the study conducted by Bonanno and Hymel (2013) demonstrated that individuals who fall victim to cyberbullying

are more prone to experiencing emotional disorders. Given the pervasive nature of social media in people's lives, escape is often unattainable, thereby exacerbating the syndrome of depression in cyberbullying and intensifying depressive symptoms over time (Qaraqesh & Aldakhel, 2023). Cyberbullying is a serious phenomenon faced by Jordanian society (Qaraqesh & Aldakhel, 2023). According to Fredrick et al. (2023), there is an urgent need for further study since the widespread use of social media exacerbates depressive symptoms in victims of cyberbullying. According to previous research, cyberbullying affects depression. Thus, this study assumes the following:

H1: Cyberbullying is associated with depression.

Social Anxiety as a Mediator

Cyberbullying has a notable influence on mental well-being, particularly on depression and social anxiety. Wang et al. (2019) found that cyberbullying perpetration directly predicts depression, with social anxiety mediating this relationship. This was further supported by Zhao et al. (2023), who found that witnessing cyberbullying is associated with depressive symptoms and social anxiety. Zhao et al. (2023) highlighted the importance of social anxiety as a mediator in the connection between cyberbullying and depression. Consequently, research has consistently shown that cyberbullying is associated with adverse outcomes for both victims and perpetrators. Kowalski et al. (2014) and Squillace et al. (2023) highlight

the significant impact of cyberbullying on mental health, with victims reporting increased depressive affect, worsening anxiety, and suicidal behavior.

Likewise, multiple studies have consistently shown that cyberbullying dramatically affects the development of social anxiety. Numerous studies examining the link between cyberbullying perpetration and the emergence of social anxiety symptoms have revealed that experiences of cyberbullying predict higher levels of social anxiety among users (Coelho & Romão, 2018; Xia et al., 2023). In addition, cyberbullies often engage in the creation of fake online identities and deceptive behaviors, which are intricately linked to social anxiety (İçellioğlu & Özden, 2014). This tendency towards anonymity and fear of identification further exacerbates social anxiety and depression (İçellioğlu & Özden, 2014). Moreover, evidence suggests that being a victim of cyberbullying is a critical predictor of social anxiety (Wang et al., 2019; Zhao et al., 2023). The relationship between cyberbullying and social anxiety is complex and multifaceted, as demonstrated by research exploring its mediating and moderating effects (Wang et al., 2019). This exploration enhances our understanding of how cyberbullying influences social anxiety, thereby revealing the intricate dynamics of their interactions. This comprehensive view also highlights the bidirectional nature of cyberbullying and social anxiety, where each can be both a cause and consequence of the other, illustrating the intricate dynamics involved in this critical social issue.

Similarly, social anxiety and depression frequently co-occur, as highlighted by numerous studies (Lynch et al., 2021). Social anxiety frequently precedes the occurrence of depression (Xie et al., 2020). This notion is further supported by a previous longitudinal study that revealed that social anxiety can serve as an early indicator of subsequent depression (Nordahl et al., 2018). Additional investigations have identified social anxiety as a significant risk factor for depression, exerting a pivotal influence on the initiation and progression of depressive symptoms (Nordahl et al., 2018). Additionally, studies have demonstrated that social anxiety mediates the relationship between harmful internet use, cyberbullying, and depression (Wang et al., 2019; Zhao et al., 2023).

To illustrate the importance of social anxiety in understanding the relationship between cyberbullying and depression, this study focused on its role as a mediating factor that enhances the impact of bullying on mental health. Individuals with social anxiety are more sensitive to negative interactions, making them more vulnerable to cyberbullying (Xia et al., 2023). This type of bullying increases feelings of isolation, which impairs social anxiety. Social anxiety, a primary depression risk factor, causes negative thinking and social isolation (Wilkialis et al., 2021). Therefore, understanding social anxiety as a mediating factor is essential to explain the disparity in the effects of cyberbullying on depression across individuals and to provide insights for developing effective strategies to address

these issues (Lam et al., 2022). Based on a literature review, cyberbullying affects social anxiety and depression, and social anxiety affects depression. Social anxiety also plays a mediating role in this relationship. Thus, this study hypothesizes the following:

H2: Cyberbullying is associated with social anxiety.

H3: Social anxiety is associated with depression.

H4: Social anxiety mediates the effects of cyberbullying on depression.

Gender as a Moderator

Gender plays a pivotal role in determining psychological impacts (Lin et al., 2021; Mahmoud et al., 2023), with women experiencing more complex forms of bullying, such as harassment or abuse, which increases the risk of depression (Guerra et al., 2021). In contrast, men may face social pressures that diminish their feelings and exacerbate their psychological impact (Fisher et al., 2021). Stereotypes and social roles also influence the community's response and support for victims, making gender a key element in understanding differences in the psychological impacts of bullying (Salin, 2021).

According to Lin et al. (2021), gender roles are socially constructed positions that establish cultural norms and behaviors that are stereotypically acceptable and suitable for men and women. The reasons why men and women ascribe different causes to the onset of depression may be related to their gender schemas (Salin, 2021). According to Gao et al. (2021), cyberbullying is the

leading cause of depression in both sexes. Moreover, the level of cyberbullying among male students is greater than that among female students (Salin, 2021). In contrast, females who experience higher levels of depression tend to be more likely to acknowledge their exposure to stress and exhibit signs of depressive symptoms (Halldorsdottir et al., 2021). In support of this argument, a study conducted by Gao et al. (2021) confirmed that the level of depression among individuals differs by gender. Moreover, there has been much discussion about the possibility that higher-than-average levels of depressive symptoms in women are a result of gender inequality (Salk et al., 2017).

Patriarchal structures play a pivotal role in shaping gendered experiences of cyberbullying in Jordan, reflecting prevailing social and cultural values that define acceptable gender roles and behaviors (Alsawalqa & Alrawashdeh, 2022). Women and girls are often subject to severe restrictions regarding their use of the internet and social media, making them more vulnerable to cyberbullying (Shahrour et al., 2020). In contrast, cyberbullying against males may be viewed as reinforcing dominance or social power, underrecognizing its psychological effects. Jordanian society has historically prioritized a notion of “masculinity” and “manliness,” wherein violence and bullying perpetrated by boys are normalized and regarded as an expression of bravery and manhood (Eneizat et al., 2023; Shahrour et al., 2020). In addition, some studies have

found that gender significantly moderates the relationship between cyberbullying and depression (Hu et al., 2021). This gender difference may also stem from the use of social media. According to Collantes et al. (2020), cyberbullying is a predictive factor of depression. However, the relationship varies according to gender, as women tend to score higher than men; therefore, gender is considered a moderator in this relationship. Since there are differences in these relationships between boys and girls, it is crucial to examine gender roles in the connections between cyberbullying and depression (Lahav-Kadmiel & Brunstein-Klomek, 2018). However, Rodriguez-Besteiro et al. (2021) found that gender does not significantly affect the same moderator. Therefore, based on previous studies, this study assumes the following:

H5: Gender moderates the effects of cyberbullying on depression.

Conceptual Framework

The literature supports an association between cyberbullying and depression (Agus et al., 2021), cyberbullying and social anxiety (Coelho & Romão, 2018), and social anxiety and depression (Nordahl et al., 2018). To our knowledge, however, very few investigations have been conducted on social anxiety, which has the potential to function as a mediating variable in the relationship between cyberbullying and depression. It is important to note that individuals may experience varying degrees of depression depending on their levels of social anxiety. In other words, social anxiety may serve as

a mediating factor between the effects of cyberbullying and depression. In addition, the levels of depression differ between males and females; therefore, the adverse effects on individuals vary. Therefore, gender played a moderating role in cyberbullying and depression. The conceptual framework of the current study is presented in Figure 1.

METHODOLOGY

Research Design

Quantitative research facilitates the attainment of study objectives in a systematic, formal, and objective manner, thus elucidating the anticipated correlations among variables (Bloomfield & Fisher, 2019). The quantitative method was deemed the most suitable for the present study because it facilitates the collection of accurate data that enhances the correctness of the obtained replies (Bloomfield & Fisher, 2019). Therefore, the current study employs

a quantitative research approach to achieve its objectives and test the hypotheses. The study was conducted with students from the Faculty of Media at Zarqa University, Jordan. Purposive sampling was used to identify Zarqa University Faculty of Media students for this study. This non-probability method selects people with relevant traits or experiences. This strategy was used to ensure that the study sample included people who knew or had experienced the research issue, which improved accuracy and specificity. Given the study’s nature and subject, selecting a targeted sample of students from the Faculty of Media allows for a more realistic exploration of their ideas and experiences regarding the research issue.

Based on the demographic information of the respondents, the number of males was 73 (33.2%), compared to 147 females (66.8%). Of the respondents, 87 (39.5%) were aged 18–19 years, 93 (42.3%) were

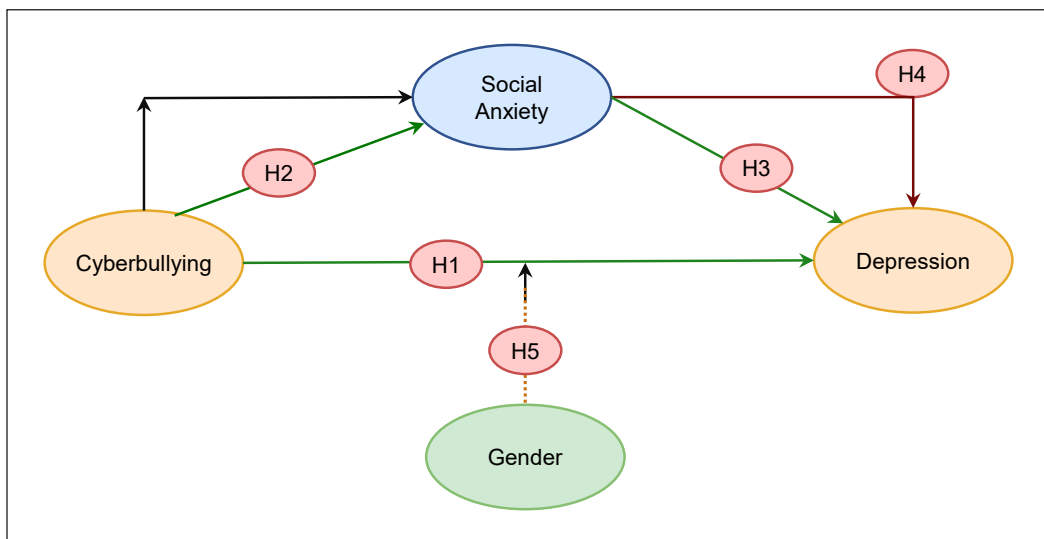


Figure 1. Research framework

aged 20–22 years, and 40 (18.2%) were aged 23 years or older (6.9%). Moreover, the number of students in the first academic stage was 41 (18.6%), those in the second stage were 67 (30.5%), those in the third stage were 64 (29.1%), and those in the fourth stage or higher were 48 (21.8%). Questionnaires were distributed online to the participants to collect data on the research topic. The questionnaires were carefully designed to ensure the comprehensiveness of the questions and their relevance to the study objectives. They were sent electronically to facilitate access and to increase the response rate. The data for this study were gathered in January 2024. A total of 220 students from Zarqa University, Faculty of Media, participated in this study. The participants were selected using a purposive sampling method.

Measurements

To ensure the suitability of these tools in the Jordanian context, the questionnaire was presented to five academics and media experts, and minor changes were made to the tools in Arabic. None of these tools includes subscales. However, the constructs were conceptualized in accordance with the local context and population. A scale measuring social anxiety, established by Fenigstein et al. (1975) and refined by Scheier and Carver (1985), was employed in the current investigation. The six items comprised the social anxiety scale. Participants scored each item on a 5-point rating system from 1 (i.e., “strongly disagree”) to 5 (i.e., “strongly agree”). Reverse one item (SA4).

In the current study, Cronbach’s alpha for the scale was 0.85, indicating reliability. A questionnaire comprising 17 questions was used to assess students’ levels of depression symptoms (Radloff, 1991). A 5-point Likert scale, ranging from 1 (i.e., “To no extent”) to 4 (i.e., “To a very large extent”), was used to rate the items. This measurement consisted of four negative items (DP4, DP6, DP10, and DP14). In this study, the Cronbach’s alpha for the scale was 0.91, indicating reliability. This study measured student cyberbullying using the Cyberbullying Scale created by Stewart et al. (2014). There are 16 items on this scale. Participants were asked to grade their feelings based on the frequency of their occurrence. Items 3 to 16 were ranked from 1 (that is, “Never”) to 5 (that is, “Always”). In this study, the Cronbach’s alpha for the scale was 0.94, indicating reliability.

Ethical Considerations

Given the sensitive topics of cyberbullying and mental health, ethical measures were followed strictly. Informed consent was obtained from all participants involved in this research, confirming their understanding of the research objectives, their voluntary participation, and their right to withdraw their participation at any moment (Resnik, 2020). Second, confidentiality was maintained by ensuring the anonymization and secure storage of the data while protecting participant privacy and preventing potential harm. To ensure that participants felt at ease and supported throughout the study, they received a

debriefing and information about mental health support resources.

Data Analyses

SPSS software (version 21) was used to run the Mardia macro to check whether the data were averaged (Cain et al., 2017). The dataset did not exhibit multivariate normality, and the multivariate skewness ($\beta = 10.13$, $p < 0.001$) and kurtosis ($\beta = 57.11$, $p < 0.001$) assessed using Mardia's tests indicated rejection of the null hypothesis. The study's measurement model and structural model were examined using the non-parametric analytic software Partial Least Squares Structural Equation Modelling (PLS-SEM) following the recommendations of Hair et al. (2016). The significance of the path coefficients was further tested using a bootstrapping approach with 5000 resamples (Hair et al., 2016).

RESULTS

Measurement Model

Reliability and Validity

Composite reliability was employed to check the internal consistency of the scale, as it is considered appropriate for PLS-SEM because it measures different outer loadings on the construct (Hair et al., 2016).

As indicated in Table 1 and Figure 2, after eliminating four items from the depression scale and one item from the social anxiety scale, the composite reliability ranged from 0.86 to 0.948, surpassing the recommended threshold of 0.7 (Hair et al., 2016). The removal of five items was undertaken to enhance the Average Variance Extracted, aligning with the suggestion provided by Hair et al. (2016) to reach a value above the 0.5 threshold. Additionally, the average variance extracted (AVE) was used to determine convergent validity. Table 1 demonstrates that all latent constructs had AVE values above 0.5, thus proving convergent validity. If the AVE was more than 0.5, the latent construct explained more than half of its indicator variance.

Coefficient of Determination, Effect Size, and Collinearity Statistics of Measurements

As shown in Table 2, a significant effect size on depression ($R^2 = 0.38$) and social anxiety ($R^2 = 0.16$) was also found. The relationship between cyberbullying and Social Anxiety, however, showed only a small to moderate impact ($F^2 = 0.196$). Furthermore, as all variance inflation factors for the predictors were less than five, there was no collinearity problem (Hair et al., 2016).

Table 1
Outer loadings

	Items	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
Cyberbullying	14	0.944	0.948	0.578
Depression	13	0.919	0.923	0.508
Social Anxiety	5	0.851	0.86	0.628

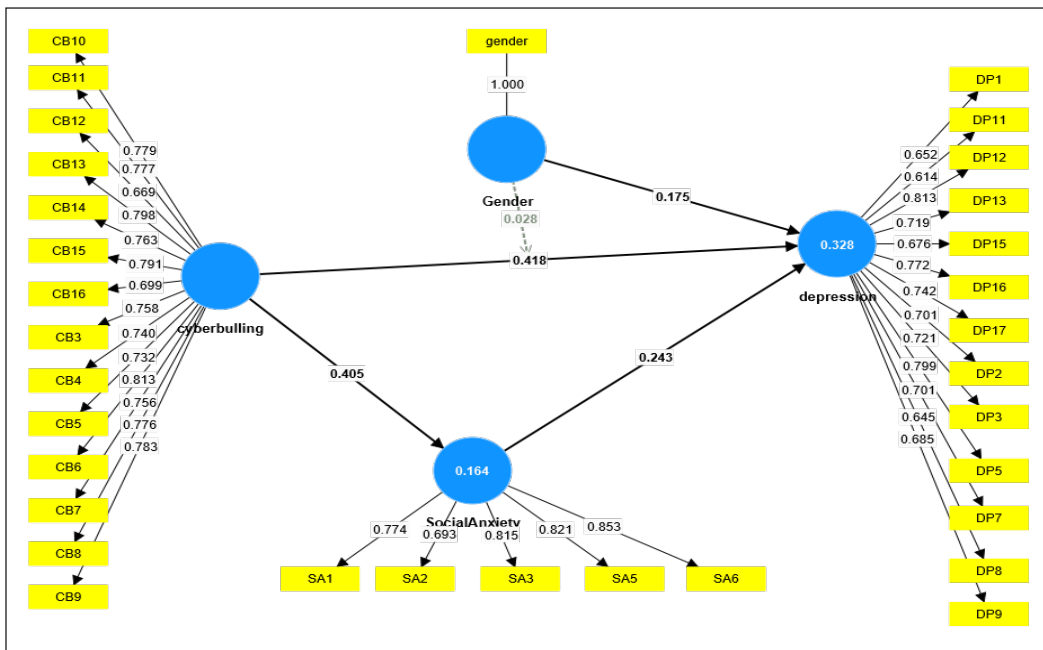


Figure 2. Measurement model (Outer loadings)

Table 2
Coefficient of determination (R^2), and effect size (F^2)

	R^2	F^2
Depression	0.328	
Social Anxiety	0.164	
Cyberbullying		Social Anxiety 0.196
Cyberbullying		Depression 0.099
Social Anxiety		Depression 0.068
Gender		Depression 0.009
Gender x cyberbullying		Depression

Structural Model

The PLS-SEM results for testing Hypotheses 1, 2, and 3 showed that cyberbullying was positively associated with depression ($p < 0.05$). Cyberbullying was positively correlated with social anxiety ($p < 0.05$). Social anxiety was positively correlated with depression ($p < 0.05$). Therefore, H1, H2, and H3 were supported (Table 3).

Mediating Effects

PLS-SEM was used to test Hypothesis 4, which suggested that social anxiety mediates the effect of cyberbullying on depression. As shown in Table 4, the analysis indicated that the indirect effect ($p < 0.05$), $CI = [0.040 - 0.169]$, was statistically significant, with a t -value of 2.982. Therefore, H4 is supported.

Table 3
Results of the direct relationship

Relationship	Path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
CB → DP	0.418	5.077	0.000	[0.249, 0.574]	Supported
CB → SA	0.411	7.797	0.000	[0.303, 0.505]	Supported
SA → DP	0.244	3.399	0.001	[0.104, 0.384]	Supported

Note. * $p < 0.05$

Table 4
Mediating effects

Relationship	Path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
CB → SA → DP	0.101	2.982	0.003	[0.040, 0.169]	Supported

Table 5
Moderating effect

Relationship	path coefficient	t-values	p-values	95% Percentile Confidence Interval	Decision
Gender*CB → DP	0.035	0.291	0.771	[-0.145, 0.227]	Unsupported

Moderating Effect

PLS-SEM was used to test Hypothesis 5, which suggests that gender moderates the effect of cyberbullying on depression. As shown in Table 5, the analysis indicates that the interaction effect ($p > 0.05$), $CI = [-0.145, -0.227]$, was not statistically significant, with a t -value of 0.291. Thus, H5 was not supported.

DISCUSSION

The study discovered that men and women felt that the psychological impact of cyberbullying was equal. This goes against the conventional wisdom in research that is currently in circulation, which frequently suggests that women are more likely to

experience online harassment. According to some studies, girls are more likely than boys to internalize bad online encounters, leading to higher rates of anxiety and depression (Kowalski et al., 2014). Overall, the findings of this study indicated that there are not many differences between males and females who experience cyberbullying, indicating the need for more research on the contextual or cultural elements that might be responsible for these similarities. The aforementioned conclusion in the Jordanian context can be explained by social pressure and rapid changes in social media usage. In Jordan, male and female teenagers use social media and are equally exposed to online harassment. Both men's

and women's demands affect their private and public lives in conservative societies (Al-Badayneh et al., 2024).

Understanding the dynamics of cyberbullying has greatly benefited from the use of current theoretical frameworks, such as Bandura's SCT from 1977 and Ecological System Theory. However, these ideas might not fully consider Jordan's unique sociocultural setting, in which societal and familial expectations have a significant impact on coping strategies and mental health outcomes. In light of these constraints, a more specialized theoretical framework that can effectively explain the connection between cyberbullying, social anxiety, gender, and depression in Jordan is urgently needed. Cultural dimensions should be incorporated into any suggested framework, including the impact of family dynamics and social media on identity, as well as how these factors interact with the pressures Middle Eastern teenagers confront (Al-Hassan et al., 2021). This approach could bring together the layered influences of the environment, community, and society in terms of how cyberbullying may affect teenagers' psychological well-being by combining EST (Bronfenbrenner, 1979) with Bourdieu's (1986) cultural capital theory.

This study created a moderated mediation model of cyberbullying based on earlier empirical research using gender as a moderating variable and social anxiety as a mediating variable. Researchers have described associations between cyberbullying and depression (Wright et al., 2018),

cyberbullying and social anxiety (Wang et al., 2019), and social anxiety and depression (Martínez-Monteaquedo et al., 2020).

Moreover, the results revealed a strong positive relationship between cyberbullying and depression. Cyberbullying is an essential indicator of the mental health, such as depression and psychological well-being of its victims (Agus et al., 2021; Collantes et al., 2020), so this study is consistent with many previous studies discussed earlier, for example, the study by Ćorić and Kaštelan (2020) and the study by Wright et al. (2018). Similarly, the present study confirmed a correlation between social anxiety and depression among college students. These results are consistent with those of previous studies (Lynch et al., 2021; Xie et al., 2020). Additionally, studies on various populations, such as nurses and adolescents, have revealed a positive correlation between social anxiety and depression (Lynch et al., 2021; Xie et al., 2020). In addition, the results highlight the substantial connection between cyberbullying and social anxiety. These findings align with research showing noteworthy correlations between different forms of cyberbullying and social anxiety (Xia et al., 2023).

Furthermore, prior studies have indicated that cyberbullying can lead to significant psychological challenges for both perpetrators and targets, specifically manifesting as depression (Agus et al., 2021; Collantes et al., 2020). However, previous research has tended to concentrate on the direct effects of cyberbullying on depression, with little attention paid

to the indirect effects of cyberbullying on depression, such as moderating and mediating mechanisms (Eneizat et al., 2024; Wang et al., 2019). Consistent with previous studies, the results of the current study indicate that cyberbullying has the potential to impact students' depression directly and indirectly through the mediating role of social anxiety. According to Coelho and Romão (2018), students engaging in cyberbullying exhibit significant signs of social anxiety and social disengagement. Consistent with empirical research (Nordahl et al., 2018), social anxiety was found to be a susceptibility factor for depression. Cyberbullying increases the risk of depression by increasing social anxiety. There were some correlations between these two factors and the other variables. Zhao et al. (2023) discovered that social anxiety plays a role in mediating the connection between depression and cyberbullying.

This study provides a deeper analysis of the role of cyberbullying in causing depression, focusing on the indirect link between cyberbullying and social anxiety. The results showed that cyberbullying indirectly contributes to the emergence of depression but increases levels of social anxiety in individuals exposed to it. Social anxiety, which arises as a result of negative online experiences, can lead to feelings of isolation and rejection, which increases the likelihood of developing depressive symptoms (Wilkialis et al., 2021). Furthermore, the study suggests that cyberbullying can undermine self-

confidence and lead to low self-esteem, which increases the impact of social anxiety and ultimately exacerbates depressive symptoms (Bhatnagar & Narayan, 2024). These findings contribute to an expanding understanding of how cyberbullying affects mental health, indicating the need to address social anxiety as a mediating factor that contributes to the development of depression in affected individuals.

Finally, the findings suggest that the insignificant moderating impact of gender may serve as an indication of the limited significance of this variable, as experienced by individuals who fall prey to cyberbullying. Although numerous investigations have examined gender disparities in cyberbullying among young adults, these inquiries have yielded inconclusive results. A few investigations have yielded similar outcomes, indicating that these specific inquiries have discovered no gender disparities in cyberbullying (Balakrishnan, 2015; Hinduja & Patchin, 2014). Contrary to the current study, scholars have found that cyberbullying is higher among males (Cénat et al., 2019), while females are more likely to be victims of cyberbullying, and males are more likely to engage in cyberbullying behavior (Zalaquett & Chatters, 2014). Lastly, there is a possible reason for no gender differences in the current study, as cyberbullying and depression are detrimental psychological impacts of cyberbullying, which may affect both men and women equally, and the indications for cyberbullying may be the same for everyone, regardless of gender.

The study discovered that men and women felt the psychological impact of cyberbullying equally. This goes against the conventional wisdom in research that is currently in circulation, which frequently suggests that women are more likely to experience online harassment. According to some studies, girls are more likely than boys to internalize bad online encounters, leading to higher rates of anxiety and depression (Kowalski et al., 2014). Overall, the findings of this study indicate that there are not many differences between males and females who experience cyberbullying, indicating the need for more research on the contextual or cultural elements that might be responsible for these similarities. The aforementioned conclusion in the Jordanian context can be explained by social pressure and swift changes in social media usage. In Jordan, male and female teenagers use social media and are equally exposed to online harassment. Both men's and women's demands affect their private and public lives in conservative societies (Al-Badayneh et al., 2024).

CONCLUSION

In conclusion, the results showed a positive relationship between cyberbullying and depression and that social anxiety had a positive effect on depression. Moreover, social anxiety plays a mediating role in the association between cyberbullying and depression among students in Jordan. However, the results showed that gender did not moderate the relationship between cyberbullying and depression, which may

be due to the problem of cyberbullying and depression faced by both genders in Jordan.

Implications of the Study

The results of this study highlight the urgent need for legislation that addresses cyberbullying and its detrimental impact on young people's mental health in Jordan. Policymakers should prioritize the creation of comprehensive anti-cyberbullying programs in educational institutions, including awareness campaigns that inform students of the dangers of cyberbullying and encourage appropriate online conduct. Policies should be inclusive, given that gender does not significantly mitigate these associations, and acknowledging that all students, regardless of gender, face comparable risks. Collaborative efforts among educational institutions, government agencies, and mental health organizations are essential for developing effective strategies to combat cyberbullying and enhance the mental well-being of the youth.

Additional Implications encompass both theoretical and practical facets that bolster the implementation of the model and the proposed interventions aimed at assisting victims. Primarily, it is of utmost significance to acknowledge that social anxiety mediates the impact of cyberbullying and depression. Given the varied approaches and settings explored in earlier research on cyberbullying, the present study provides significant insights to expand the existing body of theory. Second, previous research has concentrated on cyberbullying. However, studies conducted in Jordan have tended not

to consider the mental health of victims of cyberbullying. The study's findings indicate that cyberbullies, particularly those who struggle with social anxiety, can also have significant mental health problems, such as depression. This should serve as a reminder to parents and educators that maintaining the mental health of cyberbullies is just as important as implementing interventions aimed at curbing their behaviors.

Theoretical Implications

This study found no substantial gender disparities in the psychological effects of cyberbullying. This surprising conclusion may be due to the cultural and societal standards in Jordan, where both genders face identical demands to maintain family values and repute. The widespread adoption of social media has also dissolved conventional gender boundaries in online behavior, exposing both men and women to cyberbullying threats. The results show that the two genders suffer similar societal pressures, and future studies should look into how changing cultural and technological environments impact these dynamics. For example, both boys and girls are under pressure to avoid embarrassing their families, rendering them equally vulnerable to the psychological effects of cyberbullying. Furthermore, the increasing adoption of social media undermines the established gender norms in online settings. Platforms like Instagram and TikTok are extensively utilized by both genders, exposing them to comparable levels of abuse. Furthermore, the anonymity and

extensive reach of social media exacerbates the effects of cyberbullying on both genders. Male victims, who are typically perceived as emotionally weak, may suffer quietly owing to societal expectations of toughness, but female victims undergo public scrutiny, which intensifies their mental distress. This shared vulnerability derives from the communal emphasis on having a "perfect" internet profile, which reflects both individual and familial honor. These findings imply that the confluence of cultural norms and technical improvements has a significant impact on the experiences of cyberbullying victims in Jordan.

While Bandura's SCT and Bronfenbrenner's EST provide useful perspectives on the connection between cyberbullying, social anxiety, and depression, they fall short of addressing Jordan's sociocultural background. SCT does not properly represent Jordanian society's collectivist structure, in which family and community have a considerable impact on individual behavior. Similarly, EST presents an extensive framework but ignores the patriarchal customs and social expectations that shape cyberbullying experiences, particularly among women. These ideas must be adapted to account for cultural variations, such as family honor and traditional gender roles.

This study emphasizes the necessity of cultural sensitivity within a theoretical framework. SCT may be improved by including factors such as family reputation and social standards seen in collectivist societies. Similarly, EST may

be improved to stress the importance of patriarchal institutions and cultural norms in mitigating the psychological effects of cyberbullying.

Limitations of the Study and Recommendation for Future Research

Despite the relationship between cyberbullying, social anxiety, and depression, this study has limitations that need to be considered. First, the study utilized self-reported data, which enhanced the possibility of bias, where participants may not truly represent their experiences with social anxiety, depression, or cyberbullying. Consequently, the actual relationships among variables may be overestimated, misrepresented, or underestimated (Podsakoff et al., 2019). Therefore, future research should consider the utilization of various data collection techniques, such as observational studies or interviews, to reduce the risk of bias. Additionally, the research's cross-sectional design makes it difficult to determine the relationship between cyberbullying and mental health outcomes (Levin, 2006). In this regard, longitudinal studies may be more suitable for accurately examining correlations. While the research study was limited to Jordanian students, it may not reflect the true experiences of young people from other cultural contexts and regions (Gámez-Guadix et al., 2020). Future research should follow broader applicability with different age groups and geographical areas.

ACKNOWLEDGEMENTS

The authors thank Zarqa University for their cooperation in conducting the work. This research is funded fully by Zarqa University, Jordan.

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A Phenomenology Study of *Dhikr* Spiritual Meditation Practice Among Recovering Drug Abusers

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ABSTRACT

Spirituality and religiosity-based interventions have emerged as powerful platforms within substance use recovery and research. In particular, the incorporation of meditation is becoming crucial. However, *dhikr*, as one of the pivotal meditation practices in Islam, has yet to be fully understood. The present article aimed to explore the experiences of *dhikr* meditation practice among recovering drug addicts. The study utilized a phenomenological qualitative study design with face-to-face, semi-structured interviews. A total of six participants, comprising recovering drug addicts who had been in the Islamic rehabilitation program that practiced *dhikr* spiritual meditation for at least two years, were interviewed in this study. The interviews were audio recorded and transcribed verbatim. Then, the data were analyzed using thematic analysis for qualitative analysis. Four meanings emerged based on the participants' experience, namely "Redemption and Salvation," "Spiritual Journey," "Vow to God," and "Reliance and Togetherness." The findings revealed that the intertwined relationship between *dhikr* spiritual meditation and religiosity worldview has provided a powerful philosophy and cognitive framework that helps drug addicts' recovery and maintains abstinence. The study implies that the Islamic context in *dhikr* spiritual practice is fundamental in the recovery process. Further study on addiction treatment is suggested, with a focus on the *dhikr* meditation and spirituality module.

Keywords: Drug addiction, meditation, phenomenology, spirituality, substance abuse

ARTICLE INFO

Article history:

Received: 26 June 2024

Accepted: 03 February 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.02>

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INTRODUCTION

Drug addiction is a growing global concern, with recent data indicating significant increases in substance use disorders worldwide. According to the United Nations Office on Drugs and Crime (UNODC) 2023 report, approximately 296 million people globally used drugs in 2021, marking a

23% increase over the previous decade. Commonly abused substances include cannabis, opioids, and stimulants such as cocaine and amphetamines. Alarming, opioid use alone was responsible for more than 70% of the drug-related health burden worldwide. Globally, the prevalence of drug use disorders, which includes addiction, has remained around 5.3% of the population as of 2024. These disorders contribute significantly to the global burden of disease, particularly due to the health and social consequences associated with addiction (Fox et al., 2013), which signals an urgent call for immediate attention and remedial action.

Spirituality and religiosity-based interventions have emerged as powerful platforms within substance use disorder recovery and research (Bonelli & Koenig, 2013; Kadri et al., 2017; Weber & Pargament, 2014). In particular, the incorporation of meditation is becoming crucial. Over the last two decades, there has been a greater focus placed on spiritual meditation within the drug addiction literature (Chitwood et al., 2008). Recently, a systematic review (Kadri, 2024b; Kadri et al., 2020) found that spiritual meditation has a positive impact on human well-being, quality of life, as well as substance use recovery. However, the research was won over by yogic meditation and mindfulness, along with a small amount of Islamic spiritual practice, particularly *dhikr*.

In a recent study, Saged et al. (2022) showed that an Islamic-based intervention, including recitation of the Quran and

remembrance of God, reduced the levels of anxiety and depression among Muslims in an experimental study. The intervention consisted of 30 one-hour sessions. In another study, Irawati et al. (2023) investigated the impact of religious practices, which are *solah* and *dhikr*, on schizophrenia patients. The findings showed that frequent practice of *solah* and *dhikr* improves patients' mental and physical well-being as well as their attentiveness and focus. On the other hand, *dhikr* therapy, which is performed once daily, at least for 10 minutes, either independently or guided by others, has been reported to reduce anxiety levels among cancer patients, as reported by Sulistyawati and Setiyarini (2019). On the other hand, a study by Kadri (2024a) shows that consistent and continuous *dhikr* practice may assist in spiritual changes, the shift of thought, and the emotional and behavioral transformation of drug abusers. These treatments demonstrate the growing interest in spiritual practices and their impact on people's mental and physical health.

Regardless of the growing studies on spiritual meditation practice, the exploration of Islamic spiritual meditation, particularly *dhikr*, on the recovery of Muslim drug addicts is relatively unknown. *Dhikr*, as one of the pivotal Islamic meditation practices, has yet to be understood. In order to respond to the need for empirical evidence on the spiritual meditation of *dhikr* on drug addiction, the present article aims to explore the experiences of *dhikr* meditation practice among recovering drug addicts and its implications on their well-being and lives.

LITERATURE REVIEW

Dhikr, or remembrance of God, the prolonged practice of uttering the name of God or its Attributes, is one of the most significant mental spiritual practices in Islam (Saniotis, 2018). This Islamic spiritual meditation can be performed either individually or collectively at any time without any posture restriction (Guemuesay, 2012). Ahmad Nabil et al. (2016) concluded that people are using Islamic spiritual meditation, such as *solah*, *dhikr* and prayer, to reduce their depression levels, which in turn can bring calmness to the practitioner. This finding is also consistent with the randomized control study conducted by Hosseini and colleagues (2016) that found Islamic supplication, *dhikr*, reduces nervousness and anxiety among patients undergoing coronary artery bypass surgery. Furthermore, one study that marked the spiritual meditation program in addiction treatment and rehabilitation centers proved a lower relapse rate among former drug addicts (Khalid, 2008). The first detailed study on *dhikr* spiritual meditation was undertaken by Sabri et al. (2018), who reported that *dhikr* practice enhances the recovery of former drug addicts by transforming the behavioral aspects.

As stated by faith (*Iman*) and action (*Amal*), the two elements of spiritual belief and practice are inseparable from the *dhikr* meditation. The deepest interpretation is that *dhikr* meditation is unmistakably focused on the presence of God. More precisely, according to the Islamic understanding of spirituality (Koenig & Al Shohaib, 2014), Allah, the presence of God, is the root of all

religious acts and practices, including the treatment of disease and its cure.

According to Cook's (2004) study on the relationship between addiction and spirituality, this cognitive framework offers valuable insight into how recovering patients view this worldly life (Zakaria & Akhir, 2017). This includes perspective on the afterlife, the meaning of life, self-reflection, and social interaction. The combination of these meanings strengthens the recovering drug addicts' cognitive spiritual beliefs. As a result, this phenomenon will strengthen spiritual motivation, spiritual awareness, and spiritual attentiveness. These elements are crucial in helping the patient's soul undergo a spiritual metamorphosis. Following that, this deep vision created a spiritual and cognitive map that affected their behavior, emotions, and thoughts while also arousing their spiritual awareness.

This connection might help to explain why the curriculum of an Islamic rehabilitation center places a strong emphasis on the Islamic conception of the soul and how drug addiction is seen from an Islamic theological viewpoint to awaken the soul throughout the healing process. The participants will receive guidance from the awakened soul to overcome their drug addiction and strengthen their hearts. Since happiness in this life, as well as the next is the ultimate objective, abstinence is not the primary goal. All of this is, in essence, a component of the Islamic psychological process of purifying one's own heart (Al-Ghazali, 1993). Furthermore, the Islamic psychology path leads Muslims closer to

their fitrah, which is good in nature, by going nearer to God and an Islamic lifestyle based on religious teachings, Quran and Sunnah (Arslan, 2014).

The literature also explores how Islamic spiritual practices like meditation integrate with modern psychological frameworks, focusing on their therapeutic effects in the treatment of mental health disorders. Islamic meditative practices are not only a means of spiritual growth but also serve as tools for emotional regulation and mindfulness (Isgandarova, 2019). In summary, spiritual meditation is a technique that draws its teachings and insights from Islamic scripture to explain the occurrence of sickness and to suggest solutions for individuals to overcome their obstacles.

METHODS

Design of Study

An exploratory, phenomenological qualitative approach was applied, utilizing semi-structured and face-to-face individual interviews. Phenomenology study is one of the most popular traditions among the qualitative methods (Creswell, 2013). This method is particularly useful in studying a certain research interest for a particular concept or phenomenon (Yin, 2014). This study was designed using phenomenology because it offers a method for examining the issue of drug abusers by delving into the participants' perceptions. Finding the significance of the participants' experiences, as well as seeing how they live, experience, and exhibit the *dhikr* practice, was also included.

Participant

The study was conducted over a 10-month period, from May 2018 to February 2019. Prior to the commencement of this study, ethical approval was duly obtained from the Human Research Ethics Committee of Universiti Sultan Zainal Abidin (UniSZA), Malaysia. The study was conducted in full compliance with ethical standards, under protocol code UniSZA/UHREC/2018/42. The phenomenological interviews were conducted at different times for each participant. The participant was taken to the private Islamic rehabilitation center in Puncak Alam. Several recovering former residents and residents were selected to participate in the interview using purposive sampling. The management staff helped the researcher to find the eligible candidate based on the inclusion criteria were as follows:

1. Had attended for at least two years at the rehabilitation center programs. Two years was chosen because it can yield more dependable results. Long-term participants offer more consistent data on recovery trajectories, according to studies (Dennis et al., 2005).
2. The age range is 18 to 64 years.
3. Currently has been actively stopping taking substances and does not require detoxification.
4. Voluntary basis and the subjects willing to share their experiences and stories.
5. No previous and current neurological diseases or significant previous or current head injuries.

Sample Size

For qualitative studies, there are no specific calculations on the sample size (Golafshani, 2003). However, the data was considered robust after the information became saturated from the researcher's view. The data was considered saturated after the information was repeated; for instance, the participant said the same information for the same question during the interview. The average sample sizes for phenomenology studies are from three to fifteen people (Creswell, 2013). Therefore, six volunteers were interviewed.

Prior to the study, ethical approval was obtained from the university, and consent was obtained from the rehabilitation center. Demographic data of the participants were collected before the phenomenological interview process started. The semi-structured interview questionnaires were developed based on interviews with the leader of the rehabilitation center and relevant literature (Nasr, 2008; Schmitt & Pilcher, 2004) related to individuals who receive Islamic spiritual meditation. The questions highlighted the participants' personal experiences of drug addiction and how they coped and recovered.

Collection of Data

A phenomenological interview was implemented during the collection of the data (Hood & Williamson, 2008; Williamson & Hood, 2011). The main key point of this interview is to elicit detailed descriptions from the participants concerning the spiritual meditation, which is

dhikr, based on the participants' experience. It started with an open-ended question, and then the participants were asked in detail about their experience with *dhikr* practice and its effect on their life history with addiction recovery based on the developed semi-structured questionnaire. From that point, the interviewer avoids leading the questions and lets the participant recall the information as much as possible.

The qualified participants were contacted either via phone or in person at the rehabilitation center. Prior to the interview, an ethical consent form was provided after a comprehensive description of the study and confirmation that the participant agreed to participate. Due to their positive relationship with the rehabilitation center, all the patients consented to participate in the study. They each received a memento of gratitude. The interview was conducted based on the participants' choices. Before the interview began, the researcher asked the participants' permission to record the interview on a digital audio recorder. Then, face-to-face interviews were conducted at various times throughout the study duration. To make the participant feel as comfortable as possible, the researcher took the first step in this process by building rapport with the participant, focusing on their personal information and feelings. Later, the researcher explained the purpose of the interview to explore their experiences on how they cope with addiction-related issues by using the *dhikr* repetition spiritual practice. Prior to the interview, the participant has an opportunity to ask questions or to stop the interview at any time.

The researcher shifted the phenomenological approach to spiritual meditation of *dhikr* practice by asking the question, ‘How do you describe the *dhikr* treatment since you have been at the rehabilitation center?’ As the participant responded to this question, the question was followed by ‘Can you recall back on the coping action in oneself after *dhikr* treatment as detail as you can remember? Then, other questions were asked smoothly during the interview. At this point, the researcher allowed the participants to elaborate on their experiences without interruption, except when the researcher requested a further explanation or detail about a specific event. Some experiences may bring emotional feelings when talking about the hardship of overcoming the drug issue. In addition, their experiences with God, such as Allah’s Love for His Servant and the Forgiveness of God, also make them teary during the remembrance of their wrongdoer. The interview was concluded when both parties agreed that all the experiences had been conveyed as clearly as possible. The entire interview process typically lasted between one and two hours.

A face-to-face interview was conducted in the Malay language using a semi-structured questionnaire. The duration of each participant’s interview ranged from 55 to 120 minutes. The researcher is a Muslim and experienced no challenge interviewing on the concept of Islamic principles and practices. Once the interview was finished, permission was requested to contact the participant again if needed to reconfirm any

related issues during data transcription and analysis. Following the agreement of the participant on this request, contact details were asked for at the end of the interview session. After completing the interview, the important details during the interview session were noted immediately while the information was still fresh and vivid in the researcher’s memory. Moreover, nonverbal information, such as descriptions of body gestures and how they convey their stories, was also recorded in the field notes during the interview process.

Before proceeding to the second interview, the first verbatim of the first participant was transcribed to reduce the bias of the ‘I’ between the interviewer and the interviewee (Golafshani, 2003; Hamilton, 2020). This step is to be conducted to execute a more effective and robust interview for the next session. The verbatim result from the first interview served as a guide for the subsequent interview. Afterward, all the remaining interviews were also transcribed verbatim using Microsoft Office 2010. The audio of the recorded data was repeated a few times before being translated verbatim. Any unclear information about the interview was clarified for each participant prior to the data analysis.

Triangulation data was used during the data collection process. According to Bryman (2004), triangulation data needs to be conducted to increase the validity and reliability of the collected data. The semi-structured questionnaire, field notes, and the observation of nonverbal action play a key role during data collection.

Analysis of Data

A thematic analysis was employed to comprehend how the individuals' spiritual practice of *dhikr* provides significance to their lives and overall well-being. The data analysis process begins with data management and proceeds to the descriptions, classifications, interpretations, and representations of the data results (Creswell, 2013).

All the recorded interviews were saved on the computer for verbatim analysis. Once the transcribed verbatim was completed, it was necessary to extract the information in a coding format to identify all possible key issues or ideas. The coding was conducted manually by using Microsoft Office 2010 for each participant. Then, each code was carefully transferred into Microsoft Excel 2010 to form the themes and sub-themes. When transferring the coding, the researcher made an accurate judgment about the meaning and importance of the data, as well as the comparisons within and among the transcripts of each participant. Next, the quotes were rearranged from the generalization coding to produce an appropriate new theme after the judgment

process. Lastly, the findings were mapped and interpreted to achieve the objective of this interview by combining the perspectives of all participants. The global descriptions of the theme were discussed with the staff at the Islamic rehabilitation center and two other available participants for their feedback to validate the emergent theme and sub-theme.

RESULT

Participant Demographic Profile

The interviews were undertaken in the main office of the rehabilitation center, the participant's workplace, and the cafe. All the interviews were conducted in a private space. The duration of the interviews varied from 55 to 120 minutes. Table 1 displays the socio-demographic profile of the interviewed participant. What stands out in the table is the onset of addiction history at an early age, as early as 17 to 23 years old. In addition, all participants have occupations either in the private sector or are self-employed. Moreover, most participants have their families, and only two of them are still single.

Table 1
Demographic characteristics of the participants

Participant	Age of onset	Age (Years)	Abstinence (Years)	Occupation	Marital status
R1	20	48	>5 years	Non-government	Married
R2	18	48	>5 years	Manager	Married
R3	23	34	>5 years	Self-worker	Single
R4	21	37	>5 years	Self-worker	Married
R5	18	45	>5 years	Self-worker	Married
R6	17	47	>5 years	Security	Single

Meanings of *Dhikr* Practice

Four sub-themes were identified on the meanings of *dhikr* practice based on the participants' perspectives. The emerging sub-themes were as follows: (1) Redemption and salvation, (2) Spiritual journey, (3) Vow to God, (4) Reliance and togetherness. The primary theoretical framework guiding this manuscript is the theory of purifying one's heart (*tazkiyah al-nafs*) by Islamic scholar Al-Ghazali (1993), which utilizes spiritual-religious practices, specifically *dhikr*. Within this framework, the study focused on the spiritual changes that occur after practicing *dhikr* in their life and well-being. This process also aligned with the spiritual transformation theory (Paloutzian, 2005). This theory suggests that significant life changes, particularly in the context of addiction recovery, often occur through profound spiritual experiences that profoundly reshape an individual's worldview, sense of self, and life purpose.

Redemption and Salvation

The topic corresponds with the theory's notion that humans want to change their past mistakes and find significance via spiritual experiences. The participants' use of *dhikr* as a tool for purification and atonement is a direct reflection of their transforming experience, which reflects the first theme in this study. Redemption refers to a previous misconduct, especially drug consumption. A Muslim held the opinion that, from a religious standpoint, all alcohol usage, including drug addiction,

is forbidden (*haram*). The transgression act will result in a negative effect on the heart (*qalb*). The remedy for the sick *qalb* is *dhikr*. Thus, the participant practices the repetitive *dhikr* as one of the tools to redeem their previous misdeed and guilt, as well as accumulate good deeds. In addition, *dhikr* practice is also an act of asking forgiveness from Allah. One participant commented:

'This remembrance practice (*dhikr*) is like a soap to purify my heart, to cleanse the impurities. Addiction is a sin and makes my heart (*qalb*) dirty; I need to clean it. The heart is like this cup; if this cup is clean, [while lifting and demonstrating with a cup] we can drink the water. The heart is cleansed through *dhikr* practice' [R5]

Moreover, commenting on this issue, one of the participants said,

'*Dhikr* practice is our effort to revive hearts. Our hearts are black because of drugs, so the *dhikr* is like a tool to open up our hearts, even a small size like a needle hole. This tiny hole increased my awareness and consciousness; I want to repent and stop everything.' [R2]

Together, these perspectives provide important insights into one of the meanings of *dhikr*. From the perspective of participants, the repetitive *dhikr* practices act as a redemption and salvation process for their former sins. These means enabled them to resign themselves and accept reality as well as their sinful behavior.

Spiritual Journey

The second sub-theme that rose from the meaning of the *dhikr* theme is *dhikr* as a spiritual journey. Spiritual Transformation Theory emphasizes the idea of life as an evolving spiritual journey. The Muslims viewed health, illness, suffering and dying as a natural part of life. The absolute purpose of human life in this world is to have faith and worship Allah. Hence, human life is like a journey to find its definite purpose and meaning. Therefore, the participants' accounts of *dhikr* practice as a path towards personal growth and self-discovery act as a road in the spiritual journey. For example, one participant said,

'Ah, this practice is a personal journey. I want to increase the amount of *dhikr* frequently, get faster and faster during the program [while tapping on the table with his finger], but spiritually I'm not ready yet. The 'feel' of *dhikr* is different individually.' [R2]

Another commented,

'But when I do the *dhikr* consistently, over time, I understand the meanings, I'm changed, transformed the evil thought to think closer to God.' [R4]

Overall, these results indicate that *dhikr* practice means a spiritual journey to their opinions. This journey prevents them from tumbling once more into drug addiction.

Vow to God

The third sub-theme that appeared from this interview is the *dhikr* practice as a token of

promise and proof to Allah. It also highlights the role of spiritual commitments in sustaining transformation, as suggested by the Spiritual Transformation Theory. In the Islamic view, this world is just a stopover before moving to the everlasting world, which is the hereafter. Therefore, every volitional act, either good or bad, which can be in the form of a physical thought or spoken, is accounted for. A soul needs to be prepared before it comes back to Allah, which is death. Death is also a part of the journey to meet Allah. Hence, *dhikr* practice is like their vows to Allah to remain clean from drug addiction. This vow will be their proof to meet Allah in a proper way. It was suggested that,

'You know the difference between the living and the dead? The living person, his heart remembers God. Remember in here [show close to heart] I cannot say precisely, I have practiced it for years.' [R5]

Another participant echoed this view,

'No, I cannot take the drug again; consumption of the drug may break my vow with Allah. I keep this vow even when I am asleep.' [R6]

In summary, these results describe that repetition of *dhikr* practice was like a vow to Allah. This vow makes them realize and self-reflect (*muhasabah*) on their future action, including the consumption of drugs.

Togetherness and Reliance

The last sub-theme emanated is togetherness and reliance on God. The practice of *dhikr*

is not just a spiritual meditation or habit. This practice was connected tightly with the essence and feel of togetherness and reliance on God, which supports the theory of this study. Due to the essence, the participants feel a sense of belonging and transcendence. The comment below illustrates the current issue,

‘To understand easily, the role of remembrance in a simple way, God loves someone who remembers Him, right? For example, I always give you something you like, I am concerned about you, and I want you to be comfortable with me, don’t I? It is the same situation, we need to remember God, and so we can get God’s love. But remember, we need Him, but He does not need us.’ [R5]

Next, other participants said,

‘Why should *dhikr*? Why should it be remembered and practiced? Because the surroundings and circumstances of the inside and the outside of the rehabilitation center are different. When I go to the public, no one will stop me. Therefore, this practice makes me feel that Allah is always with me. Guided me. *Dhikr* is different from *solah* (prayer), I can remember Him anytime, anywhere, no specific time or movement.’ [R4]

Taken together, these results emphasize that there is a mighty relatedness between spiritual *dhikr* meditations and the sense of a Higher Power. All four sub-themes that emerged are correlated with God and the hereafter.

DISCUSSION

The research question sought to answer how participants make meaning of *dhikr* meditation practice experiences. Through the result of global description, it became apparent that participants made meanings of their experiences (Giorgi, 2009; Pollio et al., 1997); in this case, the *dhikr* meditation practice was described by the recovering drug addicts in a specific context. The experiences begin with their perception of the meanings of *dhikr* meditation practice in their journey of life as it occurs within the settings of an Islamic-oriented substance use recovery program. Then, it was followed by a significant self-change that came out after continuous *dhikr* meditation practice.

The context of the general experience description is not ample; it is handy to interpret the emerged themes (Merriam, 2009; Wassler & Kirillova, 2019) in the forms of the principles of the Islamic perspectives, culture, body, worldview and time, which all lay out a spirituality practical context for how addiction recovery is experienced by continuous practice of *dhikr* meditation. This interpretive structure is essential to flesh out a fuller meaning in the general description.

Meanings of *Dhikr* Practice

Generally, the entire set of meanings was closely related to each other under the spiritual connection with God as a focal point. As is known, the connectedness, transcendence and the feeling of a Higher Power and God are considered one of the fundamental meanings in the spiritual

dimension (Cook, 2004). More specifically, in the Islamic concept of spirituality (Koenig & Al Shohaib, 2014), the source of any religious act or practice, including illness and its remedy, is grounded in God's presence, which is Allah. As the selected rehabilitation center is an Islamic-based treatment, this may be one of the possible explanations for why their views are tightly connected with the presence and feeling of God.

Redemption and salvation can be defined as the guilt towards the wrongdoer because of drug addiction. Redemption is an individual atonement after having committed bad deeds towards others (Dowling & Scarlett, 2006), while salvation is an act to save and protect oneself from any type of evil (Borras et al., 2010; Mason et al., 2009). Both meanings revealed the profound intrinsic of the participant to seek forgiveness for their bad behavior. Therefore, the results of this theme indicate that former drug addicts try to be free from guilt and achieve calmness in their hearts by using *dhikr* spiritual meditation. It may be that these participants benefited from the continuous and prolonged practice of *dhikr* after a specific period. This finding is consistent with the study of Marlatt and Kristeller (1999), who found that religious, spiritual practice, such as meditation and prayer, helps them overcome addiction behavior problems and maintain abstinence.

The other perspective is the spiritual journey of life. Based on the Islamic cognitive framework, this world is like an examination place, and the ultimate resting place is the Hereafter (*Akhirah*) (Zakaria &

Akhir, 2017). Therefore, a Muslim believes that if they follow the teachings of God and the Prophet, they will receive a good life in the Hereafter in return (Vasegh et al., 2009). Most of the participants resolved to adopt this mindset during the *dhikr* meditation practice. Participants take this opportunity to get close to Allah with the guidance of the *Mursyid* (*spiritual leader*) and try to seek a nice place in *Dar al-Akhirah, the Hereafter*. This finding provides valuable insight into the meaning of this worldly life based on the Islamic perspective. Recognition of the profound meaning of this life brings up the resolution to continue this life properly without any regret. As drug addiction is one of the huge crises in their life, the *dhikr* meditation improves their understanding of the meaning of life as a journey toward the Hereafter that eventually enhances their resolution to maintain abstinence. In general, beliefs in the Hereafter philosophy assist people with drug addiction problems by motivating them to maintain abstinence and become better people.

The current studies found another interesting meaning of continuous spiritual meditation, *dhikr*, which indicates this practice is like a spiritual vow (*baiah*) towards Allah, which is consistent with the study by Sabri et al. (2018), on the recovery of former drug addicts by using the *dhikr* practice. Muslims believe that humans are one of God's creations. Therefore, all creations have the obligation to acknowledge and know their Creator (Dalhat, 2015). These cognitive beliefs were strongly engraved in their heart and minds before they started the

dhikr meditation with the help of *Mursyid*. The *Mursyid* indirectly strengthens their faith in Allah and provides social support to maintain the practice until the participants speak out their spiritual vow voluntarily. According to the study by Shamsalinia et al. (2014), religious teachings and a supportive religious environment within the family have a noticeable impact on the patient's spirituality from the beginning of their recovery process and throughout. Peer and family support, as well as the interchange of experiences during recovery, are significant factors in shaping participants' perspectives on spirituality and maintaining abstinence. Moreover, the religious teaching, especially repentance to God, that has been provided by the *Mursyid* in the Islamic rehabilitation center acts as a catalyst, which leads the drug addicts to be more optimistic and positive about their future lives. Consequently, their sense of togetherness and reliance on God for their future endeavors will enable them to sustain their abstinence.

CONCLUSION

In conclusion, the present study advances the theory of spiritual and religious coping by demonstrating how *dhikr* meditation enhances cognitive and perceptual abilities among recovering drug abusers, which had not been explored in prior research. Additionally, the study also emphasizes a phenomenological insight as a vital gap in the knowledge about the *dhikr* spiritual meditation in the field of drug addiction recovery, which revealed the meanings of *dhikr* spiritual meditation based on

the recovering drug abuser's perspective. The *dhikr* meditation is not only labeled as a religious act or worship practice, but it has a deeper meaning. It makes the practitioner accept their wrongdoing and realize the actual meaning and purpose of this life in this world. These worldviews assist them to become a new person and strengthen their motivation to keep on this track, which is abstinence. The journey started with the vow to Allah. Subsequently, after a prolonged mindset and action, they can feel the togetherness and reliance towards Allah in this world. Eventually, they will experience happiness in the world and the hereafter. All these meaning was carved deep down in the practitioners' hearts. The strong inwardness towards God's presence was achieved through consistent *dhikr* spiritual meditation until its effects were revealed outward. The study's findings might be helpful in the planning and preparation stages of addiction treatment, for instance, by giving policymakers input on rules pertaining to Islamic-based therapy in healthcare facilities. Therefore, as a recommendation, healthcare professionals and counselors should be concerned and support individuals' beliefs, values, culture and spiritual paradigm in order to develop a holistic drug addiction treatment strategy. Above all, religion and spiritual meditation cannot be separated in Malaysian Muslim culture. Therefore, the integration of spiritual meditation into the context of drug addiction treatment and rehabilitation is recommended.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to the Universiti Malaysia Sabah, Universiti Sultan Zainal Abidin and all expert panel members for their valuable contributions and insights that greatly assisted in the publication of this study.

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Devising a Phonological Awareness Test for Indonesian Children: A Pilot Study

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ABSTRACT

The few existing phonological awareness (PA) studies in the Indonesian language have mainly concentrated on primary school children. PA in young preschool Indonesian children, particularly those aged below 4, has been neglected. Some aspects of PA, including error patterns and early reading abilities in preschool children, have all been neglected. The potential impact of gender on PA has also not been analyzed. It is essential to develop a PA test for use by professionals (e.g., speech therapists) to identify children with poor PA and to provide early remediation to enable them to cope well later in primary school. This study aims to describe the development process of a newly devised PA test, the Indonesian Phonological Awareness Test (IPAT). The purpose of the study is to propose items that are valid and reliable and to administer them to a small sample of 16 Indonesian children aged 3–6 as a trial before conducting the test on a larger sample size to strengthen its validity. The IPAT comprised two sections: PA tasks (syllable detection, syllable deletion, rhyme detection, rhyme oddity, alliteration detection, phoneme deletion) and reading tasks (letter knowledge, non-word reading, word reading, and sentence reading). The results show that the

IPAT is proven to be valid and reliable based on the findings of face validity, content validity, and inter-rater reliability. It can be developed into a standardized screening test to identify the potential risk of reading disorders in Indonesian preschool children. Future studies with larger samples are recommended to strengthen the statistical power of the IPAT.

ARTICLE INFO

Article history:

Received: 06 July 2024

Accepted: 03 February 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.03>

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Keywords: Early reading, emergent literacy, phonological sensitivity, preschool children, reading development

INTRODUCTION

Reading is one of the critical abilities children develop during their school age; they access academic information and knowledge through reading scripts. Children with reading and writing difficulties will impact their academic achievement later in school (Duff et al., 2023; Majorano et al., 2021). A meta-analysis study estimated that the worldwide prevalence of developmental dyslexia (a specific learning disorder in reading) is around 7.10% (Yang et al., 2022). Phonological awareness (PA) has been proven to be one of the critical factors for early literacy acquisition, besides print knowledge and oral language that developed before school entry (Milankov et al., 2021; Palomino et al., 2021). PA develops when the mental lexicon representations of words change to identify, analyze, and modify the structure of words into segmental representations, allowing them to access smaller speech sound segments in a word, helping them decode novel words when reading (e.g., syllable level: *sunshine* can be broken down into *sun* + *shine*, and combine with another syllable, for example, *sun* + *rise* → *sunrise*. Phoneme level: *gold*, if the initial phoneme is deleted, the word can be *old*; Lonigan et al., 2013).

PA represents a cognitive skill measured by various tasks. Since the critical role of PA in identifying the risk of reading disability and early remediation purposes has been proven, assessment is necessary because children learn to read at the preschool and kindergarten levels (Veríssimo et al., 2021). PA tests have been widely developed in

many countries and across languages with various tasks to identify PA development and remediation purposes.

In contrast, studies on PA in Indonesian children remain underexplored; an investigation in the early 2000s through a longitudinal study of early school-aged children was initiated by Winskel and Widjaja (2007) and an unpublished work by Wibawati (2018). Later studies of PA in preschool-age children by Siswanto and Pratomo (2019) and Taruna et al. (2019) have provided useful preliminary information. Nevertheless, investigation in this area must be increased because existing small-scale studies have recruited children with narrow age ranges (4–6 years old). In addition, based on previous Indonesian PA studies, advanced PA tasks must be added, such as syllable deletion and phoneme deletion tasks for preschoolers and sentence reading tasks for children who can already read.

This study aimed to develop a new PA test for Indonesian preschool children, which addresses several gaps in previous studies in Indonesia, including the addition of subtests for syllable and phoneme deletion, and an expanded age range to include children as young as 3–3 years 11 months old. Moreover, a sentence-reading task was provided for children aged 5–6 years 11 months old.

LITERATURE REVIEW

Research indicates that PA skills typically develop from larger units (rhymes and syllables) to smaller units (phonemes),

according to the theory of grain size (Justi et al., 2021). However, several studies suggest that PA skills development occurs in overlapping rather than strictly discrete stages (Cassano & Steiner, 2016). Cassano and Schickedanz (2015) found that among typically English-speaking children aged 3 to 5, the syllable units developed earlier and proved to be the easiest for various tasks (e.g., syllable segmentation /water/ → water). However, onset-rime (e.g., what is the first sound of /big/? → /b/) and phoneme segmentation (e.g., /big/ → /b/+i/+g/) tasks were particularly challenging, not emerged by age 3; and even by age 5, the mean percentage of correct responses did not exceed 20%. Similar to the study on *Brazilian Portuguese-speaking* children aged 6 years, syllable tasks were found to be easier than rhyme and phoneme tasks. Phoneme segmentation proved to be the most challenging; even after one year of schooling, this PA skill only reached a mean score of 7% (Justi et al., 2021).

On the other hand, syllable segmentation was reported to be more challenging than rhyme and phoneme-level PA tasks for *Arabic-speaking* children aged 5 years and 6 months to 8 years and 6 months (Abou-Elsaad et al., 2016). The Arabic beginner readers were observed to have relatively poor PA towards the final coda in closed syllable words (e.g. /lo:n/ color). One plausible reason might be the impact of early program instruction, which concentrates on the cohesive CV unit (letter and diacritic) represented by a consonant and a short vowel (CV) as the most basic unit for

decoding words. Other diacritic aspects, such as the null vowel and consonantal geminate, have all been neglected.

PA studies in Southeast Asian countries, such as Malaysia, have indicated that syllables are the easiest task rather than the phoneme task for Malaysian Malay-English-speaking children (Manisah, 2005). Relevant to the study, phoneme segmentation is the most difficult task for Chinese English-Malay-speaking children (Chan et al., 2024). Similar to the previous studies, in Singaporean Mandarin-Chinese-English (CE) speaking children, children who had Chinese as their L1 were more sensitive to syllables (Yeong & Liow, 2012).

Previous Indonesian PA studies consistently indicated that syllables are more salient and develop earlier than rhymes and phonemes (Wibawati, 2018; Winskel & Widjaja, 2007; Siswanto & Pratomo, 2019; Taruna et al., 2019) in Indonesian language-speaking children. Winskel and Widjaja (2007) revealed that phoneme awareness (measured through a phoneme deletion task) was the strongest predictor of PA in Indonesian school-age children. Indonesian language has a highly transparent orthography and close correspondence between letter names and sounds, facilitating access to phoneme-level units (Winskel & Lee, 2013; Winskel & Widjaja, 2007).

Reading abilities involve understanding the meaning of printed words (text), which requires association among orthography, phonology, and semantics (Milledge & Blythe, 2019). Heilmann et al. (2018) found that 85% of children only knew

fewer than 10 letters (e.g., *A, B, O*) before entering preschool at age 3. Piasta et al. (2022) showed that children aged 4-5 could master 12%–50% of letters. In the next stage, several studies indicated that by the end of kindergarten (aged 6 years old), approximately 63%–70% of children could accurately read single words (Malling et al., 2022; Ne’eman & Shaul, 2021). Once word recognition becomes more automatic, reading fluency will be improved, and reading comprehension will be easier (Milledge & Blythe, 2019).

Several factors have been discerned to influence PA and reading abilities in children, for example, age, gender, socio-economic (SES) skills and language (phonology) skills (Fröhlich et al., 2013; Niklas et al., 2016; Vlachos & Papadimitriou, 2015). The age of children is claimed to be a particularly strong influencing underlying factor in the development of childhood PA and reading abilities. Older children are observed to have outperformed younger children (Abou-Elsaad et al., 2016; Mohamed et al., 2021; Milankov et al., 2021). Gender, SES, and literacy exposure have also been reported to influence PA and reading abilities in children. Children from middle SES (middle income) have been reported to have outperformed children from low SES (low income) on the PA tasks (Bilvashree et al., 2010). The findings on the impact of gender on PA are more controversial; some researchers have reported significant gender effects (Lundberg et al., 2012), while others have reported no significant gender effects (McTigue et al., 2020).

The process of reading involves interaction with the phonological pathway. Accurate processing of speech sounds and letter-speech sound mappings (decoding) is important in the early stages of reading development (Verwimp et al., 2021). Studies exploring the types of error patterns children make on PA tests are still limited. In general, error patterns could be divided into 10 types, namely substitutions, repetition, omissions, additions, reversals, segmentations, rhyme, alliterations, no responses, and other errors (Chan et al., 2024; Lim, 2018; Winskel & Widjaja, 2007). A preliminary study by Hayward et al. (2017) analyzed the types of common error patterns in phonemic segmentation tasks among English-speaking children, and the most prevalent error patterns were additions, insertions, and multiple errors. The findings provide initial insights into the PA performance characteristics of children and the strategies they used to respond to instructions in the PA tasks.

The newly developed IPAT in this study aims to design a culturally and linguistically appropriate test for Indonesian preschool children by addressing gaps identified in the previous studies, considering sociolinguistic characteristics of the Indonesian language, and providing developmental error pattern analysis to strengthen the interpretation of PA performance.

METHODS

Participants and Materials

The newly developed Indonesian PA test, named the Indonesian Phonological

Awareness Test (IPAT), is a set of early literacy screening measures for Indonesian preschoolers administered to a total of 16 typically developing Indonesian children with ages ranging from 3:0 to 6:11 years old who were recruited using a simple random sampling of kindergarteners in urban areas of Surakarta, Central Java, Indonesia, where the Indonesian language is dominant. As this pilot study was designed as the first step in a larger research project, only approximately 10% (16 subjects) of the main study's participants (104 subjects) from one preschool were recruited. Nevertheless, the participating children were representative of the Javanese preschool children. They were all controlled for potential biases in the small sampling in that only those subjects who met the following inclusionary criteria were recruited: (1) the subjects were not undergoing speech therapy services or had a history of receiving speech therapy services, (2) no reported hearing loss, intellectual disabilities, and other syndrome disorders, (3) middle to high SES, middle to high household monthly income, (4)

minimal literacy exposure, learning to recognize vowels in Indonesian language and alphabetical letters, (5) one additional literacy exposure criterion for the older children (5 years old and above) should be learning to read (syllables, words, and sentences). The reading tasks (word reading, non-word reading, and sentence reading) were evaluated in this age range.

With the small number of participants, the present study aims to gather preliminary data and insights for the subsequent stages of developing PA assessment tools for Indonesian preschool children. In the first pilot study, eight typically developing Indonesian children aged 3 to 6 years and 11 months (four boys and four girls) were recruited using simple random sampling. After making several adjustments, another group of eight different children was recruited for the second pilot study. Table 1 provides the demographic profile of the participants in both sets of the pilot study. Nevertheless, only the subjects in the second pilot study were assessed using the finalized version of the IPAT.

Table 1

Demographic profile of the participants in both sets of the pilot study

Age group	Age range	Subject	Gender	Age (months)	
				First Pilot Study	Second Pilot Study
1	3;00–3;11	1	Girl	41	45
		2	Boy	43	45
2	4;00–4;11	3	Girl	58	55
		4	Boy	52	56
3	5;00–5;11	5	Girl	62	64
		6	Boy	64	62
4	6;00–6;11	7	Girl	77	80
		8	Boy	77	83

The development of the PA test was based on linguistic unit variations, task operations, and word familiarity (Cassano & Steiner, 2016), which have been adjusted to suit the Indonesian culture and language for preschool children. All children recruited in both sets of pilot studies used the Indonesian language as their primary language, even though they also received exposure to the Javanese language, which is a widely spoken local language in Java. Indonesian is the national language of Indonesia. It is a primary language that must be mastered and used as a language of instruction at all school levels. In urban areas, people prefer to use the Indonesian language as their primary language of communication (Lamb & Coleman, 2008). Cross-linguistic transfer when communicating does not significantly affect Indonesian speakers. The selected test items include words that Indonesian preschool children are familiar with, covering all word classes (nouns, verbs, adjectives, and adverbs), as well as Indonesian vowels, consonants, and various syllable structures (Herdini, 2015; Lapoliwa, 1981; Soderberg & Olson, 2008).

The PA test in the present study comprises two sections: (1) the phonological awareness tasks and (2) the early reading tasks (letter knowledge tasks and reading tasks). The present study was conducted in three phases: (1) face validity by the experts, (2) conducting pilot study set 1, (3) revision, finalization and content validity, and (4) pilot study set 2. This study has been approved by the Research Ethics Committee at The National University of Malaysia (UKM PPI/111/8/JEP-2022-435).

The Development of the Indonesian Phonological Awareness Test (IPAT)

The initial construct of the IPAT comprised nine tasks: (1) syllable detection, (2) syllable segmentation, (3) syllable deletion, (4) rhyme awareness, (5) isolating coda, (6) rhyme judging, (7) alliteration awareness, (8) phoneme segmentation, and (9) phoneme deletion. The reading tasks included letter knowledge, non-word reading, word reading, and reading passage comprehension. In the reading passage comprehension task, children were given a short passage titled "*Pergi ke Sekolah (Goes to School)*." The reading passage consisted of 10 simple sentences narrating a series of student activities involved in preparing for school in the morning. After reading the passage, children were asked to answer five simple multiple-choice questions according to the information provided in the passage. Several modifications were reconstructed based on expert face validity comments.

Face Validity

Face validity was conducted to check the instrument's appropriateness based on the rate of agreement by the experts before using it on the subjects. This instrument was rated by six Indonesian experts consisting of an Indonesian linguistic lecturer (a male aged 55 years with 27 years of experience), three Indonesian speech therapists (a male aged 46 years, a female aged 36 years, and a female 31 years with 9–13 years of experience), and Indonesian kindergarten teachers (two females aged 26–27 years with more than three years

teaching experiences). All the experts were familiar with Indonesian language.

Experts were asked to rate the feasibility of the instrument using a dichotomous scale with categorical options “Yes” and “No” through the criteria illustrated by Desai and Patel (2020; Appendix 1), including (1) the appropriateness of grammar, (2) the clarity and unambiguity of items, (3) the correct spelling of words, (4) the correct grammar of the sentence structure, (5) the appropriateness of font size and space, (6) legible printout, (7) the adequacy of instruction, (8) constructing the instrument in a well-thought-out format, (9) the appropriateness of the level of difficulty, and (10) the reasonableness of the items with the purpose of the instrument.

Based on the rating agreement among the six experts, the agreement rate for the PA tasks was high: 86.677%, the word-level

reading task was 96.67%, and the reading passage comprehension task was 95%. Through this process, several comments were obtained to improve the test construct. Table 2 provides modifications based on the expert’s recommendations.

First Pilot Study

The first pilot study was conducted on eight children (Table 1) to check the suitability of the initial test construct. Table 3 provides the modifications based on the findings of the pilot study set 1. It is worth noting that isolating coda and phoneme segmentation was removed since all children, including the eldest children, scored zero marks for both tasks. This finding was congruent with the previous findings on Indonesian children (Siswanto & Pratomo, 2019; Taruna et al., 2019). Syllable segmentation was also removed as it is redundant with syllable

Table 2
Modifications based on the expert’s recommendations

No	Modifications	Examples
1	The variety of word classes (most of the items were nouns).	<i>pepaya/ papaya</i> → <i>belajar/ study</i> (noun) (verb)
2	The variety of the number of syllables (Most of the items were disyllabic.)	<i>bantal/ pillow</i> → <i>sepeda/ bicycle</i> (disyllable) (trisyllable)
3	The variety of syllable structures (Most of the items were open syllables.)	<i>pagi/ morning</i> → <i>langit/ sky</i> (open syllable) (closed syllable)
4	The pronoun and its meaning in the reading comprehension passage. (The first sentence is partially repetitive of the second one; the pronoun “aku” (I) is less child-friendly.)	<i>Setiap hari aku bangun pagi. Aku selalu bangun jam enam pagi agar tidak terlambat ke sekolah.</i> (Literally, every morning I wake up. I always wake up at six o’clock in the morning so that I will not be late for school. → <i>Adi adalah siswa taman kanak-kanak. Adi selalu bangun jam enam pagi agar tidak terlambat ke sekolah.</i> (Adi is a preschool child. Ada always wakes up at six o’clock in the morning so that he will not be late for school.

deletion. Both tasks required children to identify and separate syllables in words, but having to separate each syllable in the word by pausing each syllable was more challenging than leaving out a syllable in the word for the youngest children. Rhyme judging and alliteration awareness tasks were renamed into rhyme oddity and alliteration oddity, followed by changing the instructions and items (e.g., “*topi-kaos-jaket*, which one rhyme with *kopi*?” → “Which one does not sound similar *suka-duka-malu*?”). Similar to the rhyme task, instruction and items in the alliteration task were changed (e.g., “Does *bola-pola* start with the same sound?” → “Which one does not start with the same sound *kucing-burung-kambing*?”). The instruction of the phoneme deletion was changed without involving the examiner in

pronouncing the target sound but directly giving examples. The items were changed to include all phoneme categories based on place of articulation and manner of articulation (e.g., “Delete the first sound and say the remaining part of the word!” “*kuda*” → “*uda*” (instructing without pronouncing the target phoneme). Syllable and phoneme deletion tasks only included the initial target position. In instructing the rhyme awareness tasks, the term “rhyme” was changed to “sounds similar” (“*bola-pola*, does it sound the same?”). The modifications were made, and the examples of each subtest are described in Table 3.

A letter knowledge subtest was added for all age ranges, as the reading abilities of younger children have not yet emerged. The reading passage was broken down into

Table 3
Modification of test items based on the findings of the first pilot study

No.	Original Version	Finalized Version
1	<i>Syllable Segmentation</i> The child was asked to separate each syllable in the word by pausing each syllable. e.g., <i>pisang</i> → <i>pi – sang</i>	This task was removed because it seemed redundant with the syllable detection task (which was easier for the child to do).
2	<i>Syllable Deletion</i> The child was asked to delete one syllable (initial, medial and final positions) of the words and say the remaining parts of the words. e.g., “Say <i>buku</i> without <i>bu</i> → <i>ku</i> ” “Say <i>sepeda</i> without <i>pe</i> → <i>seda</i> ”	The instruction was changed only to delete the initial syllable of the words because it was easier to do than in other positions and recall the last remaining syllables they heard, e.g., <i>buku</i> becomes <i>ku</i> .
3	<i>Rhyme Awareness</i> The child was given a pair of words and asked to judge whether both words rhymed. e.g., <i>bola-pola</i> , <i>do the two words rhyme?</i> → <i>yes</i> .	<i>Rhyme Detection</i> The name of the task was changed to rhyme detection to highlight the task’s operation (detection).
4	<i>Isolating Coda</i> The child was asked to pronounce the final sound of the word provided, e.g., What is the last sound of <i>lem</i> ? → /m/.	This task was removed because it was too difficult for the participants in all age ranges; Indonesian children were unfamiliar with phoneme production.

Table 3 (continue)

No.	Original Version	Finalized Version
5	<p><i>Rhyme Judging</i></p> <p>The child was provided with a series of four words; children were asked to choose one of the words that rhymed with the target word given.</p> <p>e.g., <i>topi – kaos – jaket</i>, which one rhymes with <i>kopi?</i> → <i>topi</i>.</p>	<p><i>Rhyme Oddity</i></p> <p>The word stimulus was limited to only three words helpful in reducing a child's memory load. The more words presented, the harder it would be for them to remember. The child was asked to choose a word that did not rhyme with the other two, which made it easier than the previous instruction.</p> <p>e.g., Which one doesn't sound similar: <i>Suka–duka–malu?</i> → <i>malu</i>.</p>
6	<p><i>Alliteration Awareness</i></p> <p>The child was given a pair of words and asked to judge whether both words start with the same sound.</p> <p>e.g., <i>tikus–timun</i>, do the two start with the same sounds? → <i>Yes</i>.</p>	<p><i>Alliteration Oddity</i></p> <p>The word was changed into three words, and the child was asked to choose one of the words that did not start with the same sound. This change prevented the child from responding based on their previous experience with the rhyme detection task.</p> <p>e.g., Which one does not start with the same sound: <i>Kucing–burung–kambing</i> → <i>burung</i></p>
7	<p><i>Phoneme Segmentation</i></p> <p>The child was asked to clap the number of phonemes in a word while segmenting each of the phonemes.</p> <p>e.g., <i>Say each of the sounds in the word sapi while clapping your hands!</i> → /s/ /a/ /p/ /i/ (4)</p>	<p>This task was removed because it proved too difficult for participants across all age ranges, and Indonesian children were unfamiliar with phoneme production.</p>
8	<p><i>Phoneme Deletion</i></p> <p>The child was asked to delete one of the sounds (initial and final position) of the words and say the remaining parts of the words.</p> <p>e.g., <i>Say baju without /b/</i> → <i>aju</i></p>	<p>The instruction was changed only to delete the initial syllable of the words because it was easier to delete the initial position and recall the last remaining syllables they heard.</p> <p>The instruction was changed to directly provide the example without saying the deleted targeted phoneme. Indonesian children were unfamiliar with phoneme production. Children were asked to delete only the initial phoneme of the words because it was easier to do than other positions and recall the last remaining parts they heard, e.g., <i>buka</i> becomes <i>uka</i>.</p>
9	<p><i>Letter Knowledge</i></p> <p>The child must name every single lowercase letter presented randomly on a 12 × 9 cm card. The correct response is if the child produces the letter sound or a combination of vowel and consonant as a syllable.</p>	Retained.
10	<p><i>Non-Word Reading</i>. The child was asked to read ten non-words from the word list, e.g., <i>ma, dis, nejo</i>.</p>	Retained.
11	<p><i>Word Reading</i></p> <p>The child was asked to read ten familiar words from the word list, e.g., <i>jam, roda, gajah</i>.</p>	Retained.

Table 3 (continue)

No.	Original Version	Finalized Version
12	<i>Reading Passage</i> The child was asked to read aloud a simple passage and was provided with five simple multiple-choice questions based on the story.	The passage was broken down into sentences, and children were asked to read each sentence to assess their reading accuracy. The modification was made because children did not yet understand how to answer the questions and were still in the word recognition stage rather than the comprehension stage.

sentences and only evaluated for accuracy, not comprehension. Word reading, non-word reading, and reading passage tasks are only for students aged 5–6 years.

Content Validity

The IPAT was finalized based on the face validity comments and the result of the first pilot study modifications. In the next step, content validity was carried out to assess if an instrument is relevant and representative of the targeted construct it measures (Rusticus, 2014). Four speech therapists (two males aged 29–46 years with 9–13 years of experience, and two females aged 35–36 years with 13 years of experience) and two kindergarten teachers (females aged 27–30 years with more than four years teaching experiences) rated each item in the PA test to measure its relevance based on a scale of 1–5 (Appendix 2). The degree of agreement among experts was calculated using two formulas: CVI for items (I-CVI) and CVI for scales (S-CVI). I-CVI is the proportion of the content experts giving the item a relevance rating. The calculation formula for I-CVI is the number of experts in agreement divided by the total number of experts. S-CVI is the average of the I-CVI scores for all

items on the scale or the average of the proportion relevance judged by all experts. The calculation formula for S-CVI is the average of I-CVI scores across all items. Based on the calculation, it was found that $I-CVI = 0.83$ and $S-CVI = 0.98$, which was based on Polit et al. (2007), the acceptable cut-off score of CVI for six experts is at least 0.83; it can be concluded that IPAT was declared valid.

Table 4 presents the final construct, along with a description of each task for IPAT, following the first pilot testing, revision, and finalization of the test items, and examination of content validity. Six PA tasks remained: (1) syllable detection, (2) (initial) syllable deletion, (3) rhyme detection, (4) rhyme oddity, (5) alliteration oddity, and (6) (initial) phoneme deletion. The reading tasks remained with four subtests: (1) letter knowledge, (2) non-word reading, (3) word reading, and (4) sentence reading.

The finalized IPAT consisted of two sections: the PA tasks and early reading tasks (Appendix 3: Scoring Form of the IPAT). The PA tasks consisted of six tasks (syllable detection, syllable deletion, rhyme detection, rhyme oddity, alliteration oddity, and phoneme deletion). The reading tasks

consisted of four tasks (letter knowledge, word reading, non-word reading, and sentence reading). The letter knowledge task consisted of 26 lowercase letters of the alphabet printed on paper size 12.7×7.62 cm. The letter knowledge task was given to all subjects; the non-word reading, word reading, and sentence reading were only given to the children in the age groups 5–5 years 11 months old and 6–6 years 11

Table 4
Description of test items in the finalized IPAT

No.	Tasks	Description	Examples
PA			
1	Syllable Detection	This task is used to assess the child's ability to identify the number of syllables in a word. This task involves segmenting a word into syllables and clapping for each syllable.	Repeat the word I say while clapping for each syllable! 'Bola'/ball → 'bo'-'la' (while twice hand claps to represent two syllables).
2	Syllable Deletion	This activity is used to assess a child's ability to manipulate words by removing the initial syllable of a word and reciting the remaining syllables.	Delete the initial syllable and say the remaining part of the word. 'Pagi'/morning → 'gi'
3	Rhyme Detection	This activity is used to assess the child's ability to detect whether two words have a similar or identical final sound.	I have two words: Say 'yes' if the two words sound similar, and say 'no' if they are different. 'Bola-pola' (ball-pattern), does it sound similar?
4	Rhyme Oddity	This activity is used to assess the child's ability to identify the odd one word that does not have a similar final sound to the other two words.	I have three words; choose the one that sounds different. 'Suka-duka-malu' (like-grief-shy) → 'malu'
5	Alliteration Oddity	This activity is used to assess the child's ability to identify the odd one out by word, which does not start with the same initial sound as the other two words.	I have three words; choose one word with a different initial sound. 'Kucing-burung-kambing' (cat-bird-goat) → 'burung'
6	Phoneme Deletion	This activity is used to assess the child's ability to manipulate words by removing the initial sound of the word and saying the remaining parts of the word.	Delete the initial sound and say the remaining parts of the word. 'Baju' (shirt) → 'aju'
Reading			
1	Letter Knowledge	The printed lowercase alphabets were presented to the child randomly, and each child was given the same order of the letters. The child was asked to name each letter.	<i>e.g., e, b, k, u.</i>
2	Non-Word Reading	The child was asked to read 10 nonsense words from the word list that consisted of no longer than three syllables.	<i>e.g., ma, dis, nejo, kiwaga.</i>
3	Word Reading	The child was asked to read 10 familiar words that consisted of no longer than three syllables.	<i>e.g., jam, roda, sepatu</i>
4	Sentence Reading	The child was asked to read five sentences. Each sentence contained a different number of words; the total number of words in all sentences was 51.	<i>e.g., Adi adalah siswa taman kanak-kanak.</i>

months old. The reading tasks were designed to assess reading accuracy through read-aloud activities.

Second Pilot Study

The second pilot study was conducted to ensure that the finalized IPAT (Appendix 3) would be suitable for the subjects for whom the construct tests had been adjusted and finalized. The second pilot study was conducted on eight children (four girls and four boys) with the same criteria as the first pilot study (Table 1). The children were able to complete the revised items, and all of them were appropriate.

Testing Procedures

The children were tested individually in a separate room from their kindergarten class. All the data was collected using video recordings (Canon EOS M10 Camera), supported by a wireless microphone to enhance the volume and clarity of the recorded session. The test lasted between 20 and 30 minutes for each child. Before each subtest, the children were given two practice trials. A maximum of three attempts would be given if the child did not respond.

Scoring Procedure

A mark was given for the correct response in PA and reading tests, and a zero mark was given for the wrong or no response, except for the reading sentences. In the reading task, each sentence will be scored two marks if the children read each word accurately, and inaccurate responses will be scored using Equation 1:

$$\text{Score (sentence reading)} = \frac{\text{number of correct words}}{\text{total number of words in sentence}} \times 2 \quad [1]$$

The maximum score for the phonological awareness test is 60, while the maximum score for letter knowledge is 26, non-word reading is 10, word reading is 10, and sentence reading is 10. The reading tasks were only tested on children aged 5 and 6 years.

Inter-Rater Reliability

The second pilot study results were independently scored by a local speech-language therapist who speaks the Indonesian language fluently. This rater was a lecturer in the Speech Therapy program in Indonesia. Video recordings and scoring forms were provided. The degree of agreement was calculated based on the percentage of the agreement. The overall agreement was high: 99.6% for phonological awareness tasks and 100% for each letter knowledge, non-word reading, word reading, and sentence reading tasks.

RESULTS

The difference in PA and reading task performance across age groups was determined using statistical analysis, namely parametric One-Way Analysis of Variance (One-Way ANOVA), whilst the difference in performance for the same tasks between gender groups was determined using the Independent Sample t-test. Qualitative analysis was also provided to analyze the

developmental pattern of PA skills among typically developing children.

Statistical Analysis

Statistical analysis confirmed a significant age effect on the total score of PA ($F(3, 4) = [70.738]$, $p = 0.001$). Least Significant Difference (LSD) test for multiple comparisons found that the mean value of total PA score was significantly different between age groups 1 and 3 ($p = 0.01$, 95% C.I. = $[-29.34, -14.65]$); age groups 1 and 4 ($p = 0.00$, 95% C.I. = $[-38.34, -23.65]$); age groups 2 and 3 ($p = 0.01$, 95% C.I. = $[-29.34, -14.65]$); age groups 2 and 4 ($p = 0.00$, 95% C.I. = $[-38.34, -23.65]$); and age groups 3 and 4 ($p = 0.027$, 95% C.I. = $[-16.34, -1.65]$). However, no statistically significant difference exists in the total PA scores between age groups 1 and 2 ($p = 1.000$).

This pattern of results indicates that children aged 3 years showed little improvement in PA skills over the subsequent year when they reached 4 years old. However, beyond 4 years old, they showed more significant improvement in their PA skills, which could be attributed to more mature cognitive skills that come with biological maturation or an input (literacy exposure) factor that is associated with the age factor, i.e., the older the children, the more literacy input they receive.

Tables 5 and 6 show each mean score and standard deviation on each subtest of PA and reading tasks of all subjects, together with the One-Way ANOVA results. Table 5 indicates that PA skills were developed based on age maturity, with older children performing better than younger children. In the syllable detection, rhyme detection,

Table 5
Performance of the six subtests for PA (mean, SD) with the statistical comparison between age groups

	3–3 years 11 months (n=2)	4–4 years 11 months (n=2)	5–5 years 11 months (n=2)	6–6 years 11 months (n=2)	<i>p</i> , <i>F</i>
Syllable detection (n=10)	1.50 (0.70)	6.00 (4.24)	9.00 (1.41)	9.50 (0.70)	$p=0.074$ $F=5.143$
Syllable deletion (n=10)	0.50 (0.70)	1.00 (1.41)	5.50 (0.70)	7.50 (2.12)	$p=0.017^*$ $F=12.511$
Rhyme detection (n=10)	6.00 (1.41)	3.50 (2.12)	7.00 (1.41)	8.50 (0.70)	$p=0.110$ $F=3.926$
Rhyme oddity (n=10)	4.50 (2.12)	2.00 (2.82)	4.00 (0.00)	7.00 (2.82)	$p=0.313$ $F=1.650$
Alliteration oddity (n=10)	2.50 (0.70)	2.50 (0.70)	4.50 (2.12)	4.50 (0.70)	$p=0.290$ $F=1.778$
Phoneme deletion (n=10)	0.00 (0.00)	0.00 (0.00)	7.00 (4.24)	9.00 (0.00)	$p=0.026^*$ $F=9.778$
Total PA Score (n=60)	15.00 (2.82)	15.00 (1.41)	37.00 (4.24)	46.00 (0.00)	$p=0.001^{**}$ $F=70.738$

Notes. $*p < 0.05$ level; $**p < 0.01$ level; n=2 each: two children per age group; n=10: number of target items for each PA and reading task; n=26: number of target items for letter knowledge task

Table 6

Performance of four subtests for reading (mean, SD) with the statistical comparison between age groups

	3–3 years 11 months (n=2)	4–4 years 11 months (n=2)	5–5 years 11 months (n=2)	6–6 years 11 months (n=2)	<i>p</i> , <i>F</i>
Letter knowledge (n=26)	7.50 (7.77)	14.00 (8.48)	23.00 (1.41)	23.50 (0.70)	<i>p</i> =0.128 <i>F</i> =3.506
Non-word reading (n=10)	Not Tested	Not Tested	7.00 (1.41)	8.00 (2.82)	<i>p</i> =0.012* <i>F</i> =15.133
Word reading (n=10)	Not Tested	Not Tested	7.00 (4.24)	9.50 (0.70)	<i>p</i> =0.024* <i>F</i> =10.261
Sentence reading (n=10)	Not Tested	Not Tested	5.00 (7.07)	9.28 (0.19)	<i>p</i> =0.145 <i>F</i> =3.211
Total reading (n=30)	Not Tested	Not Tested	19.00 (12.72)	26.78 (3.55)	<i>p</i> =0.033* <i>F</i> =8.464

Notes. *Difference is significant at the $p < 0.05$ level; n=2 each: two children per age group; n=10: number of target items for each PA and reading task; n=26: number of target items for letter knowledge task

rhyme oddity, and alliteration oddity subtests, no age differences were found. Age differences were found in the syllable deletion, phoneme deletion, and total PA ($p < 0.05$). These results indicate that younger children (3–4 years old) showed comparable performance to older children (5–6 years old) on all PA tasks except for syllable deletion and phoneme deletion tasks. The deletion task, a form of manipulative task, posed significant challenges to children under 5, and it could serve as a distinctive marker for PA to distinguish younger children from older children beyond 5 years old (Figure 1).

The total score of reading tasks found a significant difference across age groups ($F(3, 4) = [8.464], p = 0.033$). Table 6 shows that there were no statistically significant differences in the performance of letter knowledge and sentence reading across age groups. At 3 years old, some children can name a few letters. At 5 years and above, it can be observed that Indonesian

children have mastered almost 90% of the 26 letters. The underlined point is the letter-sound correspondence, and the relationship between oral and written language begins to develop at the age of 5 because children can name letters even in the previous year (under 5 years), but they cannot immediately read. Children aged 5 years start learning to read at the word level and become fluent at the sentence level by the time they are 6 years old.

It is worth noting that, owing to the small sample size used in the present analysis, future research using a larger sample size is desirable to validate the present findings of age effects on PA and reading task performance in Indonesian children.

On the other hand, the results of the statistical analysis *t*-test show that there were no significant differences between boys and girls for the performance on PA tasks ($t(6) = 0.179, p = 0.86$), letter knowledge task ($t(6) = 0.078, p = 0.94$), and reading tasks ($t(2) = 0.660, p = 0.577$; Table 7). These

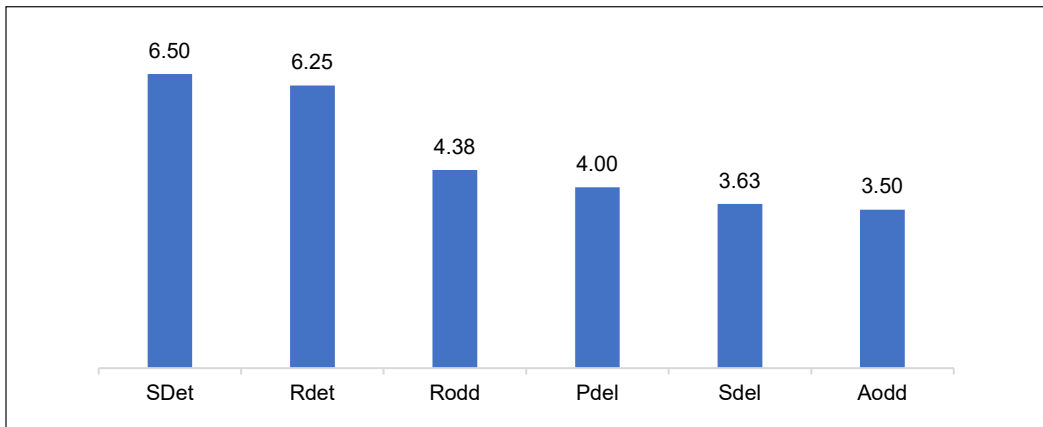


Figure 1. Mean scores comparison of each PA task

patterns of findings suggest that, overall, male and female subjects showed comparable performance on the PA and reading tasks. In other words, gender does not have a significant impact on the PA and reading skills in Indonesian children. However, given the small sample size, this finding of a negative gender impact on PA and reading skills in Indonesian children ought to be interpreted with some caution; future studies using a larger sample size are recommended to validate the present finding.

Qualitative Analysis

Figure 1 shows the differences in the mean score between each rank, from the easiest to the most difficult task, based on the mean score by descriptive statistics of each subtest obtained by the subject. Accordingly, the easiest to the most difficult were syllable detection (6.50 ± 3.81), rhyme detection (6.25 ± 2.25), rhyme oddity (4.38 ± 2.56), phoneme deletion (4.00 ± 4.62), syllable detection (3.63 ± 3.33), and alliteration oddity (3.50 ± 1.41). The larger linguistic

Table 7

The total mean score for PA skills, letter knowledge, and reading abilities between genders

Tasks	Gender (n=4 each)	
	Boys	Girls
PA (n=60)	27.25 (15.56)	29.25 (16.11)
Letter Knowledge (n=26)	17.25 (8.05)	16.75 (9.91)
Reading (n=30)	19.65 (13.64)	26.13 (2.63)

Notes. n=60: sixty items in PA tasks; n=26: twenty-six items in the letter knowledge task; n=30: thirty items in reading tasks; n=4 each: four children per gender, except reading tasks n=2 each

units (syllables) developed earlier than the smaller ones (phoneme level). This pattern of results supports the grain size theory. Analysis tasks, such as detection tasks, were easier than manipulation tasks, such as deletion, except for the alliteration oddity.

Table 8 shows the developmental patterns of errors occurring in children who could not consistently detect/separate syllables in words, detect rhymes, detect alliteration, and delete syllables and

phonemes. Some have not responded or were partial respondents to those tasks. However, at age 5 years and above, it was found that children had more consistent awareness at the level of detection and manipulation, though some showed a tendency to delete phonemes as syllables in the phoneme deletion task. These developmental patterns of PA skills provide useful preliminary information for professionals, such as SLTs,

dealing with Indonesian children to plan for therapy. More studies with large samples are necessary to provide further insights into the developmental patterns of PA, as these errors implicate typical, common patterns of PA demonstrated by typically developing children. Children who make atypical patterns may have a potential risk of delayed or disordered PA skills that require remediation.

Table 8
Developmental pattern of PA

Tasks	Patterns	Examples	Occurrences
Syllable detection	Absence of segmentation	<i>man-di</i> → 1 (clap hands)	21
	Partial segmentation	<i>se-mang-ka</i> → 2 (clap hands)	5
	Additional segmentation	<i>ke-le-la-war</i> → 5 (clap hands)	2
Syllable deletion	No response to syllable deletion	No response	25
	Absence of syllable deletion	Say “ <i>pagi</i> ” without /pa/ → <i>pagi</i>	9
	Partial syllable deletion	Say “ <i>sepeda</i> ” without /se/ → <i>da</i>	14
	Unrelated response	Say “ <i>langit</i> ” without /la/ → <i>satu</i>	3
Rhyme detection	Unable to detect rhyme	<i>jatuh – jari</i> , rhyming or not? → yes	30
Rhyme oddity	Unable to odd out that did not rhyme	Which one does not rhyme, <i>batu – kota – ratu?</i> → <i>ratu</i>	41
	Unintelligible response	Which one does not rhyme, <i>senang – jarum – benang?</i> → <i>benan</i>	4
Alliteration oddity	Unable to identify that did not start with the same initial sound	Which one does not start with the same sound, <i>timun – tomat – bayam?</i> → <i>tomat</i>	50
	Unintelligible response	Which one does not start with the same sound, <i>gelas – botol – garpu?</i> → <i>dapu</i>	1
	No response to alliteration oddity	No response	1
Phoneme deletion	Absence of phoneme deletion	Delete the initial sound of <i>senang</i> → <i>senang</i>	3
	Deleting as a syllable	Delete the initial sound of <i>hitam</i> → <i>tam</i>	7
	Pronounce the initial phoneme as a syllable	Delete the initial sound of <i>padi</i> → <i>pa</i>	7
	Unintelligible response	Delete the initial sound of <i>guru</i> → <i>ugu</i>	2
	No response to phoneme deletion	No response	29

DISCUSSION

The present study aims to investigate the feasibility of the newly developed PA test for Indonesian preschool children, specifically the Indonesian Phonological Assessment Test (IPAT). Experts found strong agreement on the test's face validity, although some adjustments were needed during the first pilot study. After these changes, content validity was conducted, and it was confirmed that it was valid. No changes were made after the second pilot study. Lastly, IPAT indicated a high level of inter-rater reliability agreement. Hence, the IPAT was proven to be a valid and reliable clinical test tool.

Age differences were analyzed to investigate the importance of separating norms for IPAT based on age. The analysis revealed a significant age effect on PA performance. Age is one of the strongest factors influencing the development of PA skills (Fröhlich et al., 2013). Older children performed better than young children (Abou-Elsaad et al., 2016; Cassano & Schickedanz, 2015; Justi et al., 2021). Santos et al. (2020) found a weak, yet significant, correlation between PA skills and age. Notably, children aged 6 performed significantly higher than those aged 4 and 5, suggesting the emergence of the metacognitive domain of language. This is relevant to Melogno et al. (2022), who indicated that children aged 5 and above have more advanced metalinguistic skills. The results of the age effect on PA skills reflect the need for separate age-based norms for IPAT.

However, post-hoc analysis showed no significant differences in PA between

the age groups 3 00–3 11 and 4 00–4 11. These findings may be affected by the fact that children are still at the preschool level and receive only limited literacy exposure. Children aged 5 and 6 experienced a richer literacy exposure, which may enhance their early literacy skills before entering primary school. Santos et al. (2020) indicated that schooling factors influenced PA skills.

The present study also revealed significant age differences in reading tasks and points to a need for separate age norms for reading tasks. Nevertheless, post-hoc analysis revealed no age differences for the performance on letter knowledge and sentence reading tasks, although older children outperformed younger children. These patterns of results could be due to the early emergence of letters in the youngest children, aged 3, and the limited progress with sentence reading over a year (from age 5 to age 6), given the minimal literacy exposure to initial reading, with only about 60 minutes per week. Caution must be exercised with the present interpretation of age effects on PA and reading skills, as the sample size used for statistical analysis is small. Future studies with a larger sample size and more robust statistical analysis are highly recommended to validate the present findings.

The present small-scale study was the first to investigate the impact of gender on PA and reading skills in Indonesian children. The results of the statistical analysis showed that there were no statistically significant gender differences in test performance for PA and reading skills. However, given the small sample size, this novel finding ought to be validated by future research with a

larger sample size and more sophisticated statistical analysis.

Based on the mean score of each subtest, indicating the level of difficulty of the overall tasks, from the easiest to the most difficult, i.e., syllable detection, rhyme detection, rhyme oddity, phoneme deletion, syllable deletion, and alliteration oddity. This agrees with the psycholinguistic grain size theory that PA skills develop from larger linguistic units (syllable or rhyme) to the smallest ones (phoneme; Ziegler & Goswami, 2005). Syllable awareness emerged early and could be observed from ages 3–4 years, while phoneme awareness would only exist at the end of the kindergarten stage (O'Brien et al., 2019; Vazeux et al., 2020). Phoneme tasks were often the most challenging in many studies across various languages (Cassano & Schickedanz, 2015; Justi et al., 2021). Furthermore, PA studies indicate similar trends, underscoring the saliency of syllables at the beginning of PA skills development in Indonesian children (Siswanto & Pratomo, 2019; Taruna et al., 2019; Winskel & Widjaja, 2007). The findings of this qualitative analysis on the order of task difficulty pointed to a need to reorder the tasks included in IPAT (Appendix 3) from the easiest to the most difficult as described above: syllable detection, rhyme detection, rhyme oddity, phoneme deletion, syllable deletion, and alliteration oddity. This reordering of tasks will be less burdensome, particularly for the youngest children aged 3, to complete the IPAT.

The analysis of error patterns in children's PA skills still needs to be explored. The most

prevalent error patterns, as analyzed in Table 8, showed that the most common patterns were no responses (especially in syllable and phoneme deletion), alliteration errors, and rhyme oddity errors. No responses in syllable and phoneme deletion showed that these two tasks were quite difficult for children under the age of 5 because these tasks are cognitively more complex than detection tasks. The deletion task is considered a high-level PA task because it requires a two-step operation (Cassano & Steiner, 2016). The findings provide consideration to test the syllable and phoneme deletion tasks only for children aged 5 and above. Secondly, the most prevalent error patterns observed were in tasks involving alliteration and rhyme oddity. This suggests that alliteration (onset) and rhyme are not widely accessible in the Indonesian language, as most Indonesian words are disyllabic (Lapoliwa, 1981). Similarly, Chan et al. (2024) also indicated alliteration errors as one of the most prevalent error patterns in English-Malay-speaking Chinese children; the participants in the study tended to choose words with related meanings to complete the task (more focus on semantics rather than the first sound of each word tested).

However, since more than 90% of syllable structures in the Indonesian language are disyllabic, Indonesian children may use a disyllabic, rhyme-based analogy (which includes alliteration and rhyme awareness) less effectively in learning to read. Larger studies are needed to obtain more representative error patterns on PA skills in Indonesian children. Carefulness is

needed when determining the type of errors for children under 5 years old, since the acquisition of speech sounds is not complete until 5 years old. If SLP faces unintelligible speech due to a speech sound acquisition issue by the child during the PA assessment session, it should not be categorized as an error in the PA tasks.

It is important to note that this pilot study's limited number of subjects may have influenced the findings. Future studies also need to include other potential factors (e.g., language skills) related to PA and reading performance.

CONCLUSION

The pilot study results provide valuable insights into the development of PA skills and early reading performance among preschool children in Indonesia. This research further requires recruiting more subjects to standardize the PA test that has been piloted and use the instrument to assess a larger population of Indonesian preschoolers.

Furthermore, the present findings contribute to the existing literature on PA and early reading abilities in children. The study also provides preliminary, useful clinical information to professionals, such as speech-language therapists (SLTs), dealing with Indonesian children.

Limitation

This pilot study recruited only a few Indonesian preschoolers, which may provide preliminary findings on the possibility and suitability of making several modifications based on related considerations. Therefore,

the generalization of the present findings to children from backgrounds other than Javanese in Indonesia is limited.

Recommendation for Future Research

This research further requires recruiting more subjects to standardize the PA test that has been piloted and using the instrument to assess a larger population of Indonesian preschoolers, including those from non-Javanese backgrounds.

ACKNOWLEDGEMENTS

The authors would like to acknowledge Prof. Dr. Djatmika, Muryanti, Niftah Fathul Jannah, Angkin Zwesti, Windiarti Dwi P., and Rexsy Taruna, for their involvement with the following tasks: face validity, content validity and inter-rater reliability. The authors are also grateful to all children who have participated in this research project and all teachers and parents who have facilitated the data collection for this study.

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APPENDIX

(I) FORM OF FACE VALIDITY
INDONESIAN PHONOLOGICAL AWARENESS TEST (IPAT)

No	Kriteria yang Dinilai (Criteria)	Respon	
		Ya (Yes)	Tidak (No)
1	Kesesuaian tata bahasa. (<i>Appropriateness of grammar</i>).		
2	Kejelasan instruksi dan item tes tidak ambigu. (<i>The clarity and unambiguity of items</i>).		
3	Ketepatan ejaan kata-kata. (<i>The correct spelling of words</i>).		
4	Ketepatan struktur kalimat. (<i>The correct structuring of the sentences</i>).		
5	Kesesuaian ukuran huruf dan spasi. (<i>Appropriateness of font size and space</i>).		
6	Naskah tes dapat terbaca dengan jelas. (<i>Legible printout</i>).		
7	Instruksi pada instrument yang adekuat. (<i>Adequacy of instruction on the instrument</i>).		
8	Struktur instrumen ditinjau dari konstruksi dan format (dipikirkan dengan baik/matang). (<i>The structure of the instrument in terms of construction and well-thought-out format</i>).		
9	Kesesuaian tingkat kesulitan instrumen bagi subjek penelitian. (<i>Appropriateness of difficulty level of the instrument for the participants</i>).		
10	Kewajaran item (berkaitan dengan tujuan dari instrument), termasuk pemilihan kosa kata dan kesesuaian usia subjek penelitian. (<i>Reasonability of items in the instrument, including vocabulary selection and age appropriateness of research subjects</i>).		
Komentar (Comments)			
Diisi oleh (Name of expert)			
Kualifikasi/ Jabatan (Qualification)			
Total Pengalaman (Tahun) (Years of experiences)			
Profesi (Profession)			
Tanggal Penilaian (Date)			

Source: Desai & Patel (2020)

(II) FORM OF CONTENT VALIDITY

*Berikan penilaian dengan tanda ✓ pada kolom nilai relevansi

Aspek	Indikator	Aitem	Pemberian Instruksi	Estimasi Usia (dalam tahun)	Nilai Relevansi				
					1	2	3	4	5
PA: Suku kata	Deteksi	1. pas	Pisahkan sambil tepuk tangan kata “pas”	3;00-6,11					
		2. mandi	Pisahkan sambil tepuk tangan kata “mandi”						
		3. malam	Pisahkan sambil tepuk tangan kata “malam”						
		4. lompat	Pisahkan sambil tepuk tangan kata “lompat”						
		5. besar	Pisahkan sambil tepuk tangan kata “besar”						
		6. jendela	Pisahkan sambil tepuk tangan kata “jendela”						
		7. semangka	Pisahkan sambil tepuk tangan kata “semangka”						
		8. belajar	Pisahkan sambil tepuk tangan kata “belajar”						
		9. kelelawar	Pisahkan sambil tepuk tangan kata “kelelawar”						
		10. matahari	Pisahkan sambil tepuk tangan kata “matahari”						
PA: Rima	Penghapusan	1.pagi	Hapus “pa” pada kata “pagi”, jadi?	3;00-6,11					
		2. ambil	Hapus “am” pada kata “ambil”, jadi?						
		3. lampu	Hapus “lam” pada kata “lampu”, jadi?						
		4. langit	Hapus “la” pada kata “langit”, jadi?						
		5. terbang	Hapus “ter” pada kata “terbang”, jadi?						
		6. sepeda	Hapus “se” pada kata “sepeda”, jadi?						
		7. bendera	Hapus “ben” pada kata “bendera”, jadi?						
		8. alpukat	Hapus “al” pada kata “alpukat”, jadi?						
		9. sederhana	Hapus “se” pada kata “sederhana”, jadi?						
		10. keluarga	Hapus “ke” pada kata “keluarga”, jadi?						
PA: Rima	Deteksi	1.bagi-lagi	“bagi-lagi”, apakah terdengar sama?	3;00-6,11					
		2.jatuh-jari	“jatuh-jari”, apakah terdengar sama?						
		3.satu-simpan	“satu-simpan”, apakah terdengar sama?						

4.beras-deras	“beras-deras”, apakah terdengar sama? apakah terdengar sama?								
5.jas-jin	“tali-kali”, apakah terdengar sama?								
6.tali-kali	“kasur-kursi”, apakah terdengar sama?								
7.kasur-kursi	“baca-kaca”, apakah terdengar sama?								
8.baca-kaca	“pisau-pantai”, apakah terdengar sama?								
9.pisau-pantai	“taman-paman”, apakah terdengar sama?								
10.taman-paman	Pilih satu kata yang terdengar beda, “batu-kota-ratu”!	3:00-6,11							
1.batu-kota-ratu	Pilih satu kata yang terdengar beda, “buka-luka-sapu”!								
2.buka-luka-sapu	Pilih satu kata yang terdengar beda, “kayu-baja-raja”!								
3.kayu-baja-raja	Pilih satu kata yang terdengar beda, “senang-jarum-benang”!								
4.senang-jarum-benang	Pilih satu kata yang terdengar beda, “tanah-raket-paket”!								
5.tanah-raket-paket	Pilih satu kata yang terdengar beda, “miring-sendok-piring”!								
6.miring-sendok-piring	Pilih satu kata yang terdengar beda, “panas-nanas-sikat”!								
7.panas-nanas-sikat	Pilih satu kata yang terdengar beda, “sawah-pohon-bawah”!								
8.sawah-pohon-bawah	Pilih satu kata yang terdengar beda, “sandal-sarung-karung”!								
9.sandal-sarung-karung	Pilih satu kata yang terdengar beda, “tuang-buang-makan”!								
10.tuang-buang-makan	Pilih satu kata yang bunyi paling depannya beda, “timun-tomat-bayam”!	3:00-6,11							
1.timun-tomat-bayam	Pilih satu kata yang bunyi paling depannya beda, “pita-kartu-kertas”!								
2.pita-kartu-kertas	Pilih satu kata yang bunyi paling depannya beda, “gelas-botol-garpu”!								
3.gelas-botol-garpu	Pilih satu kata yang bunyi paling depannya beda, “pagar-rantai-rumput”!								
4.pagar-rantai-rumput	Pilih satu kata yang bunyi paling depannya beda, “madu-minyak-garam”!								
5.madu-minyak-garam									
	Kejanggalan								
	Kejanggalan (aliterasi)								
	PA: Fonem								

6. duduk-lempar-lompat	Pilih satu kata yang bunyi paling depannya beda, "duduk-lempar-lompat"!		
7. cicak-cacing-semut	Pilih satu kata yang bunyi paling depannya beda, "cicak-cacing-semut"!		
8. hotel-pasar-hutan	Pilih satu kata yang bunyi paling depannya beda, "hotel-pasar-hutan"!		
9. jagung-pisang-jeruk	Pilih satu kata yang bunyi paling depannya beda, "jagung-pisang-jeruk"!		
10. pintu-panci-kaleng	Pilih satu kata yang bunyi paling depannya beda, "pintu-panci-kaleng"!		
1. hitam	Hapus bunyi paling depan pada kata "hitam", jadi?	3;00-6,11	
2. padi	Hapus bunyi paling depan pada kata "padi", jadi?		
3. merah	Hapus bunyi paling depan pada kata "merah", jadi?		
4. guru	Hapus bunyi paling depan pada kata "guru", jadi?		
5. roti	Hapus bunyi paling depan pada kata "roti", jadi?		
6. lima	Hapus bunyi paling depan pada kata "lima", jadi?		
7. noda	Hapus bunyi paling depan pada kata "noda", jadi?		
8. jambu	Hapus bunyi paling depan pada kata "jambu", jadi?		
9. cuci	Hapus bunyi paling depan pada kata "cuci", jadi?		
10. senang	Hapus bunyi paling depan pada kata "senang", jadi?		
1. ma	Ini dibaca apa?	5;00-6;11	
2. dis	Ini dibaca apa?		
3. nejo	Ini dibaca apa?		
4. roha	Ini dibaca apa?		
5. goyak	Ini dibaca apa?		
6. pilung	Ini dibaca apa?		
7. nyisam	Ini dibaca apa?		
8. triko	Ini dibaca apa?		
9. kiwaga	Ini dibaca apa?		
10. cibu	Ini dibaca apa?		
Penghapusan			
Ketepatan			
Membaca kata tidak bermakna			

Membaca kata bermakna	Ketepatan	1.jam	Ini dibaca apa?	5;00-6;11																		
		2.roda	Ini dibaca apa?																			
		3.gajah	Ini dibaca apa?																			
		4.santai	Ini dibaca apa?																			
		5.kerbau	Ini dibaca apa?																			
		6.nyamuk	Ini dibaca apa?																			
		7.payung	Ini dibaca apa?																			
		8.wajan	Ini dibaca apa?																			
		9.celana	Ini dibaca apa?																			
		10.sepatu	Ini dibaca apa?																			
Membaca kalimat	Ketepatan	1.Adi adalah siswa taman kanak-kanak.	Ini dibaca apa?	5;00-6;11																		
		2.Adi selalu bangun jam enam pagi agar tidak terlambat ke sekolah.	Ini dibaca apa?																			
		3.Adi segera mandi dan berganti baju untuk bersiap pergi ke sekolah.	Ini dibaca apa?																			
		4.Lalu, Adi makan nasi goreng yang sudah disiapkan ibu di meja makan.	Ini dibaca apa?																			
		5.Selesai makan, Adi pergi ke sekolah diantar oleh ayah naik motornya.	Ini dibaca apa?																			

Catatan:

1: sangat tidak relevan

2: tidak relevan

3: cukup relevan

4: relevan

5: sangat relevan

Source: Polit et al. (2007)

(III) The Scoring form of the finalised Indonesian Phonological Awareness Test (IPAT)

LEMBAR PENILAIAN TES KESADARAN FONOLOGI

Nama:	Tanggal lahir:
Jenis kelamin:	Tanggal pemeriksaan:
Nama sekolah:	Usia:

Anak diberikan maksimal 3 kali percobaan. Respon benar = 1 (satu), respon salah/tidak merespon = 0 (nol).

1. Deteksi suku kata (*Syllable detection*)

Instruksi:

“Tirukan kata yang aku ucapkan sambil tepuk tangan di setiap bagian suku katanya!”. Contoh: *gigi* → *gi-gi* (2 kali tepuk tangan)

Catat jumlah tepuk tangan pada kolom respon.

Percobaan:

No	Stimulus	Target
1	cat	1
2	balon	2

Ujian:

No	Stimulus	Target	Respon	Nilai
1	pas	1		
2	mandi	2		
3	malam	2		
4	lompat	2		
5	besar	2		
6	jendela	3		
7	semangka	3		
8	belajar	3		
9	kelelawar	4		
10	matahari	4		
Jumlah nilai				10

2. Penghapusan suku kata (*Syllable deletion*)

Instruksi:

“Hapus suku kata paling depan dan ucapkan bagian kata yang tersisa!”

Contoh: Hapus ‘*bu*’ pada kata ‘*buku*’! → ‘*ku*’

Percobaan:

No	Stimulus	Suku kata yang dihapus	Target
1	putih	pu	tih
2	boneka	bo	neka

Ujian:

No	Stimulus	Suku kata yang dihapus	Target	Respon	Nilai
1	pagi	pa	gi		
2	ambil	am	bil		
3	lampu	lam	pu		
4	langit	la	ngit		
5	terbang	ter	bang		

6	sepeda	se	peda		
7	bendera	ben	dera		
8	alpukat	al	pukat		
9	sederhana	se	derhana		
10	keluarga	ke	luarga		
Jumlah nilai					10

3. Deteksi rima (*Rhyme detection*)

Instruksi:

“Aku punya dua kata, bilang ‘ya’ kalau terdengar sama, bilang ‘tidak’ kalau terdengar beda!”

Contoh:

bola – pola, apakah terdengar sama? (ya)

melon – mulut, apakah terdengar sama? (tidak)

Percobaan:

No	Stimulus	Target
1	palu – malu	Ya
2	kaya – kotor	Tidak

Ujian:

No	Stimulus	Target	Respon	Nilai
1	bagi – lagi	Ya		
2	jatuh – jari	Tidak		
3	satu – simpan	Tidak		
4	beras – deras	Ya		
5	jas – jin	Tidak		
6	tali – kali	Ya		
7	kasur – kursi	Tidak		
8	baca – kaca	Ya		
9	pisau – pantai	Tidak		
10	taman – paman	Ya		
Jumlah nilai				10

4. Kejanggalan rima (*Rhyme oddity*)

Instruksi: “Aku punya tiga kata, pilihlah satu yang terdengar beda!”

Contoh: *suka – duka – malu?* → *malu*.

Percobaan:

No	Stimulus	Target
1	mata – dasi – kata	dasi
2	gula – paku – saku	gula

Ujian:

No	Rima	Target	Respon	Nilai
1	batu – kota – ratu	kota		
2	buka – luka – sapu	sapu		
3	kayu – baja – raja	kayu		
4	senang – jarum – benang	jarum		
5	tanah – raket – paket	tanah		

6	miring – sendok – piring	sendok		
7	panas – nanas – sikat	sikat		
8	sawah – pohon – bawah	pohon		
9	sandal – sarung – karung	sandal		
10	tuang – buang – makan	makan		
Jumlah nilai				10

5. Kejanggalaan aliterasi (*Alliteration oddity*)

Instruksi:

“Aku punya tiga kata, pilihlah satu yang bunyi paling depannya beda!”

Contoh:

kucing – burung – kambing? → *burung*.

Percobaan:

No	Stimulus	Target
1	kurma – kacang – permen	permen
2	sapi – tikus – singa	tikus

Ujian:

No	Stimulus	Target	Respon	Nilai
1	timun – tomat – bayam	bayam		
2	pita – kartu – kertas	pita		
3	gelas – botol – garpu	botol		
4	pagar – rantai – rumput	pagar		
5	madu – minyak – garam	garam		
6	duduk – lempar – lompat	duduk		
7	cicak – cacing – semut	semut		
8	hotel – pasar – hutan	pasar		
9	jagung – pisang – jeruk	pisang		
10	pintu – panci – kaleng	kaleng		
Jumlah nilai				10

6. Penghapusan fonem (*Phoneme deletion*)

Instruksi:

“Hapus bunyi paling depan dan ucapkan bagian kata yang tersisa!”

Contoh: kata *'kuda'* → *'uda'*.

Percobaan:

No	Stimulus	Fonem yang dihapus	Target
1	baju	/b/	aju
2	sore	/s/	ore

Ujian:

No	Stimulus	Fonem yang dihapus	Target	Respon	Nilai
1	hitam	/h/	itam		
2	padi	/p/	adi		
3	merah	/m/	erah		
4	guru	/g/	uru		
5	roti	/r/	oti		

6	lima	/l/	ima		
7	noda	/n/	oda		
8	jambu	/dʒ/	ambu		
9	cuci	/tʃ/	uci		
10	senang	/s/	enang		
Jumlah nilai					10

(IV) LEMBAR PENILAIAN MEMBACA**A. Pengetahuan tentang Huruf (Letter knowledge)**

Intruksi: Tunjukkan kartu bergambar huruf kepada anak, minta anak untuk menamai huruf tersebut
 “Ini huruf apa?”

No	Target	Respon	Nilai
1	e		
2	b		
3	k		
4	u		
5	p		
6	m		
7	a		
8	l		
9	g		
10	o		
11	h		
12	c		
13	t		
14	r		
15	d		
16	i		
17	x		
18	z		
19	n		
20	w		
21	s		
22	j		
23	f		
24	y		
25	q		
26	v		
Jumlah nilai			26

B. Membaca Kata Tidak Bermakna (Non-Word Reading)

Intruksi: “Bacalah kata-kata berikut!”

No	Target	Respon	Nilai
1	ma		
2	dis		

3	nejo		
4	roha		
5	goyak		
6	pilung		
7	nyisam		
8	triko		
9	kiwaga		
10	cibatu		
Jumlah nilai			10

C. Membaca Kata (Word Reading)

Instruksi: "Bacalah kata-kata berikut!"

No	Target	Respon	Nilai
1	jam		
2	roda		
3	gajah		
4	santai		
5	kerbau		
6	nyamuk		
7	payung		
8	wajan		
9	celana		
10	sepatu		
Jumlah nilai			10

D. Membaca Kalimat (Reading Sentences)

Instruksi: Bacalah kalimat-kalimat di bawah ini!

Garis bawah kata yang salah diucapkan dan tulis respon versi peserta di kolom yang disediakan. Beri nilai 2 untuk setiap kalimat yang dibaca dengan benar.

No	Target	Kesalahan	Nilai
1	Adi adalah siswa taman kanak-kanak. (6)		
2	Adi selalu bangun jam enam pagi agar tidak terlambat ke sekolah. (11)		
3	Adi segera mandi dan berganti baju untuk bersiap pergi ke sekolah. (11)		
4	Lalu, Adi makan nasi goreng yang sudah disiapkan ibu di meja makan. (12)		
5	Selesai makan, Adi pergi ke sekolah diantar oleh ayah naik motornya. (11)		
Jumlah nilai			10

Cultivating Consumer Insights: Unravelling Halal Cosmetics Purchase Intentions Among Millennial Working Women in Kuala Lumpur

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ABSTRACT

This paper aims to enhance the growth of Malaysian halal cosmetic brands by identifying key factors influencing purchase intention. Specifically, the study investigates the impact of religiosity on the intention to purchase halal cosmetic products, utilising the S-O-R model within the Malaysian context, which offers a unique perspective in halal consumerism research. An online survey employing 5-point Likert Scale questions targeted Muslim working females aged 27 to 42 years in Malaysia during 2023, with 251 responses collected through convenience random sampling. The study employs Partial Least Squares Structural Equation Modelling (PLS-SEM) for data analysis. Findings indicate a significant positive relationship between religiosity and intention to purchase halal cosmetics, while no significant relationships were found between brand equity, promotion, perceived value, attitude, and purchase intention. Despite the critical role of religiosity, ensuring true halal integrity remains challenging due to the use of collagen, gelatine, and other animal-based raw materials commonly found in cosmetics. These materials may compromise halalness if rigorous halal certification, supply chain transparency, and traceability mechanisms are not enforced, as religiosity alone cannot guarantee the integrity of end products. The study's limitations include its

focus on Malaysia's halal cosmetic sector and specific demographic characteristics, which may limit its generalisability to other contexts. Future research could explore the moderating roles of attitude and perceived value and address broader concerns about halal assurance frameworks in cosmetic products.

ARTICLE INFO

Article history:

Received: 13 July 2024

Accepted: 21 January 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.04>

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Keywords: Halal cosmetics, PLS-SEM, purchase intention, S-O-R model

INTRODUCTION

The halal industry has experienced exponential growth over the last few decades. This is an attractive business opportunity driven by rising demand, particularly from Muslim-dominant countries. Muslim spending across key halal sectors, including food, pharmaceuticals, cosmetics, travel, fashion, and media, was estimated at USD 2.29 trillion in 2022, reflecting a significant 9.5% year-over-year growth. Projections suggest that this spending could rise to USD 2.8 trillion by 2025, fuelled by the expanding Muslim population and a growing preference for ethical consumerism globally (Halal Weekly, 2023; Salaam Gateway, 2023). This growth is further supported by estimates that the global Muslim population will reach approximately 3 billion by 2060, marking a 70% increase from 1.8 billion in 2015 (Lipka & Hackett, 2017). However, significant gaps remain in the halal cosmetics market, especially among urban Millennials who seek products that align with their ethical and religious values. Religiosity heavily influences their purchasing decisions, yet many halal brands struggle to communicate their adherence to halal standards, leading to scepticism. Moreover, a lack of transparency in sourcing and ingredient integrity diminishes perceived value, deterring consumers who prioritise authenticity and sustainability (A. A. Khan et al., 2022). The sector has also not fully capitalised on digital platforms like social media and e-commerce, limiting brand visibility and consumer engagement and negatively impacting brand equity.

To resonate with this demographic, halal brands must enhance their online presence, leverage influencer marketing, and cater to diverse preferences, including varying interpretations of halal standards. Adapting to these evolving needs is essential for sustained growth in a competitive landscape (Azhar & Iqbal, 2023).

Despite halal food and beverage being the most predominant sector, with a value of USD 2,354 billion in 2022 and expected to grow 11.32% by 2029, the other halal sectors are also growing significantly (Maximize Market Research Pvt. Ltd., 2023). Halal cosmetics were valued at USD 91.5 billion in 2024 and are projected to grow to USD 131.23 billion by 2029, driven by increasing demand for ethical, natural ingredient-based products (Mordor Intelligence, n.d.). This clarifies that halal does not mainly address food products alone, but is also applicable to other products. Halal cosmetics are expected to grow continually, driven by increasing awareness around avoiding non-compliant practices like pork, alcohol, and animal cruelty in products (Suparno, 2020). The market is rapidly expanding in the Middle East due to strong cultural and religious preferences for halal products (El-Assi, 2023). Europe has also seen significant growth, particularly in the UK, France, and Germany, where a growing Muslim population and demand for ethical, sustainable products are driving the rise of halal cosmetics (Mordor Intelligence, n.d.). Similarly, consumers in North Africa are increasingly choosing halal products that align with their religious and ethical values (Euromonitor International, 2023).

In Southeast Asia, halal cosmetics are becoming more prominent in markets like Malaysia and Indonesia, where halal certification plays a key role in consumer choices (Islamic Religious Council of Singapore, 2023). As one of the fastest-growing segments in the beauty industry, the region has become a key focus for global halal cosmetics manufacturers. This growing demand underscores the global shift toward ethical and halal-certified beauty products, making halal cosmetics a rapidly expanding market worldwide. The economics of halal cosmetics in Asia-Pacific, especially Indonesia, Malaysia, India, and Singapore, are promising, as they held the biggest market share globally in 2019 (Bora, 2023). This is mainly due to the high Muslim population, such as Indonesia, with approximately 229 million Muslims in 2023, and India, with 213 million Muslims in 2020. The government's initiatives also contribute to the development of the country's halal industry. For example, the Malaysian government has allocated RM25 million to the Halal Development Corporation (HDC) under Budget 2022 to execute programs including digital branding and halal competitiveness (Nik Amiruddin, 2023). This has resulted in the emergence of more halal cosmetic brands, mainly from Malaysia and Indonesia, such as Wardah, Emina, SimplySiti, Nurraysa, and HAUS cosmetics.

The halal cosmetics industry is witnessing rapid growth, fuelled by increasing consumer awareness of religious compliance and a rising demand for ethically produced products. In Malaysia, a global

leader in halal certification, understanding the key factors influencing consumers' purchase intentions is crucial for the continued success of local halal cosmetic brands. While past studies have employed models like the Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA) to investigate purchase intentions, incorporating variables such as religiosity, ingredient safety, halal logos (N. Khan et al., 2020), and attitudes as mediators (Briliana & Mursito, 2017), the Stimulus-Organism-Response (S-O-R) model has seen limited application in this context. Most existing research has focused on online purchase intentions or other regional markets, leaving a gap in understanding the specific drivers behind halal cosmetic purchases within Malaysia. This study seeks to address that gap by (1) identifying the critical factors influencing halal cosmetic purchase intentions among millennial working women in Kuala Lumpur and (2) evaluating the applicability of the S-O-R model in this context. By applying the S-O-R framework, this paper aims to generate fresh insights into consumer behaviour, providing a deeper understanding of the motivations for halal cosmetic purchases in Malaysia's distinct market environment.

Despite the Stimulus-Organism-Response (SOR) model being utilised in various domains to understand consumer behaviour, its application to halal cosmetics remains underexplored (Suparno, 2020). Existing research often relies on traditional models, such as the Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA), to explain

halal consumer behaviour (Aisyah, 2017; Fishbein & Ajzen, 1975). These models, however, do not adequately address the unique interplay of religiously motivated stimuli and internal psychological processes that influence purchasing decisions in halal markets. Specifically, the SOR model offers a valuable framework for investigating how external stimuli, such as religiosity, interact with internal cognitive mediators like perceived value and attitude to drive consumer responses (Ngah et al., 2019). In the context of halal cosmetics, religiosity as a stimulus is particularly significant, as it directly aligns with consumers' ethical and religious principles. However, gaps remain in understanding how religiosity functions as a dominant driver compared to traditional marketing stimuli, such as brand equity and promotion. Moreover, limited research investigates the mediating role of internal processes (e.g., attitude and perceived value) within the SOR framework in the halal cosmetics domain. This study addresses these gaps by applying the SOR model to halal cosmetics, a growing sector in Malaysia, to explore how religiosity-driven stimuli influence purchasing decisions. By examining the mediators and the direct effects of religiosity, this study extends the SOR model's theoretical application to contexts characterised by faith-based consumerism.

LITERATURE REVIEW

Stimulus-Organism-Response (S-O-R)

Precedent studies concentrating on the field of halal cosmetics widely use the Theory

of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB; Aisyah, 2017; Suparno, 2020). The utilisation of the Stimulus-Organism-Response (S-O-R) model is very scarce in the context of the halal industry and general cosmetics. However, a study by Suparno (2020) has proven that applying this theory is possible and led to a substantial discovery, specifically in observing the factors of the online purchasing behaviour of halal cosmetics.

The theory of S-O-R is the revolutionary model of the Stimulus-Response (SR) theory that caters to three stages of consumer behaviour in making rational behavioural decisions, including stimulus, which refers to the element that influences one's internal state that eventually stimulates them into behaving favourably or unfavourably towards something; meanwhile, organism refers to the internal progression such as thinking, attitude, and, perception that links the external stimuli and the final action; lastly, response refers to the final decision of the consumer (Suparno, 2020). The introduction of the organisms in the latter development of the theory allows the framework to feasibly address human behaviour-related issues, including marketing and management (Ngah et al., 2019). This theory also signifies the need for a mediating variable positioned under an organism that may mediate the relationship between the stimulus and response.

Since halal cosmetics deal with religious matters, the organism component in this theory is practical in assessing the

internal process of the consumer, especially their attitude and perceived value when it comes to halal products. As the stimulus in this study, brand equity also allows the creation of consumer perception toward the brands, eventually leading to either positive or negative results (Keller, 2013). Promotion, another stimulus used, also proves how consumers decode information before making any purchasing decision (Krishna et al., 1991). If halal cosmetic brands have prominent brand equity, the consumer perceives them as having more excellent value and, in turn, chooses them over other brands. Thus, this paper claims the practicality of this framework in understanding consumers' purchase behaviour toward halal cosmetic products, as illustrated in Figure 1, which presents the research framework adopted in this study.

Purchase Intention

Purchase intention (PI) refers to the subjective probability that a consumer is willing to buy a particular product (Zhou et al., 2023). Intention is a significant indicator, as it allows for a reliable prediction of future actual purchases (Handriana et al., 2020; Schiffman & Wisenblit, 2015). It is also the integral driver in consumer behaviour theory, especially the Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA; Irfany et al., 2023). However, several studies incorporating the S-O-R model also use purchase intention as the dependent variable, such as in the context of halal cosmetics (Suparno, 2020), non-halal cosmetics (Ngah et al., 2021), and

live-streaming shopping environment (Lin et al., 2022). Thus, this paper will implement purchase intention as the response variable in the S-O-R framework.

Religiosity

Religiosity (RE) is a multidimensional theory that measures various elements that regulate one's daily activities (Nurhayati & Hendar, 2019). It reflects the individual's commitment to the teachings of the religion, mainly to appease God (Suparno, 2020). One of the most popular theories of religiosity was founded by Glock and Stark (1965) and comprises five dimensions: intellectual, ritualistic, experiential, ideological, and consequential. However, this paper addresses a slightly different dimension, as proposed by Said et al. (2014), which caters to four elements: self-identity, intellectual, ritual, and experiential, with a focus on the Islamic religion and halal products. Self-identity refers to how one perceives one's identity as belonging to or representing one's religion (Said et al., 2014). Intellectual refers to the knowledge regarding the religion, such as Islamic Law, to know the boundaries of what is permissible and forbidden to be performed by Muslims (Aruan & Wirdania, 2020). Ritual refers to the set of activities obligatory or encouraged to be performed according to Islamic Law, such as Salah and fasting during the month of Ramadhan, which shows their level of commitment to the religion by abiding by God's order (Aruan & Wirdania, 2020). Lastly, experiential refers to the feelings associated with the daily practices of the religion, such as fear

and guilt for committing sins or feelings of accomplishment for doing good deeds (Aruan & Wirdania, 2020).

Past studies have revealed various outcomes of how religiosity affects consumer behaviour. Several studies observing the purchase intention of halal cosmetics (Haque et al., 2018; Suparno, 2020) have stated that religiosity positively influences consumers' purchase of Halal cosmetics. A study on halal fashion by Aruan and Wirdania (2020) and halal detergent by Rizkitysha and Hananto (2022) also quotes a positive note. When strong religious convictions drive a consumer, every life decision, including consumption, would be based on the teachings. For Muslims, given choices of halal and non-halal products, they may opt for the halal one as it is parallel with what is suggested by the religion. However, a study by N. Khan et al. (2020) found no significant impact of religiosity on one's purchase intention for halal cosmetics. In line with this, the Department of Islamic Development Malaysia's (Jabatan Kemajuan Islam Malaysia [JAKIM]) regulations and fatwas governing halal cosmetics ensure that products adhere to religious standards, particularly regarding animal ingredients, which are crucial in shaping the purchasing decisions of Muslim consumers.

In Malaysia, halal certification for cosmetics is governed by the Malaysian Halal Certification Procedure Manual-Domestic 2020 (JAKIM, 2020), which sets clear guidelines for the certification of critical raw materials, such as collagen and gelatine. Due to their potential

contamination with non-halal sources, these ingredients require additional scrutiny to ensure compliance with Islamic principles. As part of this effort, JAKIM introduced a DNA testing policy in January 2021 to verify the halal status of ingredients such as gelatin and collagen. This policy mandates that DNA testing be conducted by ISO 17025 SAMM-certified laboratories (JAKIM, 2020). These stringent measures are designed to align the certification process with religious expectations, as they help prevent the use of haram (forbidden) substances in cosmetic products. The MS 2634:2019 standard further mandates the exclusion of alcohol and animal derivatives in halal cosmetics, ensuring products are both religiously and legally compliant (Department of Standards Malaysia, 2019). This approach reflects the deep connection between halal certification and religiosity, where Muslim consumers seek products that fulfil both their practical needs and religious obligations. This intersection of religiosity and halal certification also influences purchasing behaviour, with consumers prioritising products that reflect their religious identity and commitment to Islamic law (Maifiah & Syahirah, 2023).

Despite their religious beliefs, some Muslim consumers view non-halal cosmetic products as acceptable due to the appeal of organic ingredients, hygiene benefits, and specific solutions that sometimes outweigh spiritual concerns. However, this perception shifts as halal certification standards become stricter, particularly in Malaysia and Indonesia. In Malaysia, halal cosmetics

must comply with MS 2634:2019, which sets stringent guidelines on permissible ingredients, prohibits the use of alcohol and animal derivatives, and mandates adherence to cleanliness in production, packaging, and distribution (Department of Standards Malaysia, 2019). Malaysia's JAKIM is globally recognised for its rigorous halal certification. Fatwas formerly accessible via Malaysia's Fatwa Management System (e-SMAF) have clarified distinctions regarding gelatin sources. For instance, porcine-derived gelatin is prohibited in food and cosmetics unless it undergoes *istihalah*, a complete chemical transformation that purifies the substance. This view is consistent with rulings endorsed by Malaysian halal authorities and Islamic jurists globally (Anuar, 2023). Similarly, the Fatwa on Animal-Derived Collagen in Cosmetics (Maifiah & Syahirah, 2023) prohibits collagen from non-halal sources but permits halal-certified alternatives. Ritual religiosity involves practices like *Salah* (prayer), influencing Muslims to prioritise wudu-friendly cosmetics, as highlighted in the Fatwa on Substances That Prevent Ablution (Pejabat Mufti Wilayah Persekutuan, 2017), which emphasises that cosmetics must not hinder wudu, further shaping consumer preferences toward halal and compliant products. Experiential religiosity, encompassing emotional connections like guilt or satisfaction from religious compliance, drives Muslims to avoid products with *Mashbooh* (doubtful) ingredients, such as synthetic alcohol or non-halal emulsifiers, as addressed in

the Fatwa on *Mashbooh* Ingredients in Cosmetics (Majdina & Jasimah, 2021).

This unease leads many to avoid products containing these substances, even when there is ambiguity about their permissibility, reflecting a deep spiritual commitment. Muslims derive emotional and spiritual fulfilment from using halal-certified cosmetics, aligning their actions with religious values. By incorporating specific fatwas on gelatine, collagen, and *Mashbooh* ingredients, this discussion comprehensively highlights the role of religiosity in governing halal consumption. These insights reinforce the hypothesis that religiosity significantly influences the purchase intention of halal cosmetic products. Likewise, Indonesia's Ulema Council (Majelis Ulama Indonesia [MUI]) adheres to the HAS 23000 standard, ensuring that halal cosmetics align with Islamic principles, verifying raw material sourcing, preventing contamination with haram substances, and maintaining purity throughout production Indonesian Ulema Council (MUI; 2023). This requirement aligns with Government Regulation (PP) No. 39 of 2021 on implementing Halal Product Assurance, which mandates halal certification for products entering, circulating, and trading in Indonesia. Under Law No. 33 of 2014 on Halal Product Assurance (UU JPH), cosmetics are included in the products requiring halal certification, and this regulation will come into full effect on 17 October 2026. Halal certification standards are also gaining recognition in other regions, such as the Middle East and Europe. The Gulf

Cooperation Council (GCC) countries follow guidelines that are aligned with Islamic law and international standards. European countries are increasingly adopting halal certification in response to rising demand from Muslim consumers, with organisations like Halal Certification Europe ensuring compliance with Islamic guidelines (GCC Standardization Organization, 2023). This paper hypothesises the evolving landscape of halal cosmetics and consumer acceptance.

H1. Religiosity has a significant relationship with the purchase intention of halal cosmetic products

Brand Equity

Generally, brand equity (BE) reflects the perception and desirability of a brand by the consumer, and it is influenced by various factors that incline the consumer to perceive the brand in certain ways. Loyalty, quality, awareness, and association are mainly the determinants of brand equity (Keller & Brexendorf, 2019). This is further strengthened by a study on the purchase intention of general products (Algharabat et al., 2020) that applies the same elements. According to J. E. Lee et al. (2019), loyalty refers to the inclination to repeat purchases of the brand's products in the future, despite any marketing strategy implemented by the brand or any stimulus or condition that may divert their purchase behaviour. Quality refers to the customer's general point of view towards the brands, either positively or negatively. Awareness refers to the likelihood that a customer

will recognise a certain product from a brand if they encounter it on any marketing channel. Lastly, association refers to positive or negative information that consumes the consumer's mind and leads to the development of notions towards the brands, either in a good or a bad way (J. E. Lee et al., 2019).

A study showed a significant and positive influence of brand equity towards the purchase intention of general products (Algharabat et al., 2020). Another study in the context of non-halal cosmetics in South Korea also showed a positive influence of brand equity on purchase intention (Choedon & Lee, 2020). Therefore, this paper deduces that if halal cosmetic brands have excellent brand equity, such as high-quality products, prominent brand names, and high consumer retention, consumers would perceive them as a better option and choose them among other brands in the market. Thus, this paper hypothesises as follows:

H2. Brand equity has a significant relationship with the purchase intention of halal cosmetic products

Promotion

Promotion (PR) is vital in creating product awareness (N. Khan et al., 2020). It may induce purchasing behaviour differently depending on the types of promotions, platforms used, and frequency (Tong et al., 2022). Different promotional activities include direct, quantity, bundle, coupon, and gift promotions, which can be implemented through various platforms, primarily offline

or online (Tong et al., 2022). The widespread use of social media has also given rise to new promotional strategies such as paid advertising, influencer marketing, and content marketing. Thus, promotion in this study refers to any activities that communicate the brands or products to the consumer, including sales promotion (giving discounts, coupons, gifts, etc.), advertising, public relations, personal selling, direct marketing, sponsorship marketing, and internet including social media and e-commerce platform as per suggested by Belch and Belch (2008).

Past studies have shown the positive influence of promotion on the purchase intention of halal cosmetics among millennials in Malaysia (N. Khan et al., 2020; Ishak et al., 2019). Another study observing the effect of social media promotion on online purchase intention of general products also indicates a positive influence (Khaleeli, 2020). When halal cosmetic brands offer attractive promotions, such as price discounts, it entices consumers to choose their brands over others that do not offer similar deals. This delimits competition with other brands as consumers focus on higher-value offerings and pick the best deal. Thus, this paper hypothesises:

H3. Promotion has a significant relationship with the purchase intention of halal cosmetic products

Perceived Value

Perceived value (PV) refers to the customer's general evaluation of a product based on the value it receives and the price it pays

(Sodawan & Hsu, 2022). It stems from the equity theory, which compares the output that the customer receives against the input they offer to acquire the goods (Natarajan & Raghavan, 2024; Oliver & DeSarbo, 1998). Customers who perceive the value of the products as higher than that of other substitutes in the market are likely to engage and exhibit positive behaviour toward those products (Chen et al., 2022). Natarajan and Raghavan (2024) postulate that it involves both emotional factors, such as the good feeling of using the products, and functional value, such as the reliability of the products to meet customer needs. This study posits that the higher the perceived value of halal cosmetics, the more likely customers are to engage with the products.

A previous study shows that perceived value mediates the impact of halal-friendly attributes on Muslims' intention to visit non-Islamic countries (Sodawan & Hsu, 2022). In fact, perceived value has been widely used as a mediator, especially in the halal tourism sector (Abror et al., 2023; Lestari et al., 2022; Mursid & Anoraga, 2021), as Muslims are more attracted to destinations or countries that could provide them with great emotional and functional value. Some of these studies also incorporate the S-O-R model with perceived value as the organism (mediator; Sodawan & Hsu, 2022). Another study related to halal cosmetics indicates that perceived value has a direct positive influence on switching intention from non-halal to halal cosmetic products (Al-Banna & Jannah, 2022). Thus, this study hypothesises:

H4. Perceived value mediates the relationship between religiosity and the purchase intention of halal cosmetic products

H5. Perceived value mediates the relationship between brand equity and the purchase intention of halal cosmetic products

H6. Perceived value mediates the relationship between the promotion and purchase intention of halal cosmetic products

Attitude

Attitude (ATT) could be defined as the feeling or perception toward something, either positive or negative (Haque et al., 2018). It was first theorised by Fishbein and Ajzen (1975), describing attitude as an evaluative response to act either favourably or unfavourably towards performing certain behaviour and is most commonly used in the Theory of Planned Behaviour (TPB) and Theory of Reasoned Action (TRA). Hence, if the customer has a positive attitude toward the products, they are more inclined to engage with or even purchase them. Attitude could be categorised into cognitive and affective attitude; cognitive attitude refers to evaluation based on thinking or cognition (Eagly et al., 1994; Kwon & Ahn, 2023), whereas affective attitude is solely based on feeling or emotion (Kwon & Ahn, 2023; Zajonc, 1980).

Precedent studies show that attitude mediates the purchase intention of halal cosmetic products (Anubha, 2021; Septiarini

et al., 2022). Another study adopting the S-O-R model also stated that both affective and cognitive attitudes mediate halal cosmetics purchase intention (Suparno, 2020). Despite external stimuli that may influence consumers' intentions to purchase halal cosmetic products, consumers' positive or negative attitudes toward the brands ultimately define their actual intentions. Therefore, consumers with a bad attitude towards the brands may not intend to purchase them despite the heavy promotion offered and vice versa. This attests to the relevance of attitude as a mediating factor that induces purchase intention of halal cosmetic products irrespective of the exogenous factor. This relationship is also reflected in Figure 1, which depicts the research framework of this study. Thus, this study hypothesises:

H7. Attitude mediates the relationship between religiosity and the purchase intention of halal cosmetic products

H8. Attitude mediates the relationship between brand equity and the purchase intention of halal cosmetic products

H9. Attitude mediates the relationship between the promotion and purchase intention of halal cosmetic products

METHODOLOGY

Sample and Procedure

The population of this study consists of Muslim working women aged 27 to 42 years old in the year 2023, residing in Kuala Lumpur, Malaysia. An online

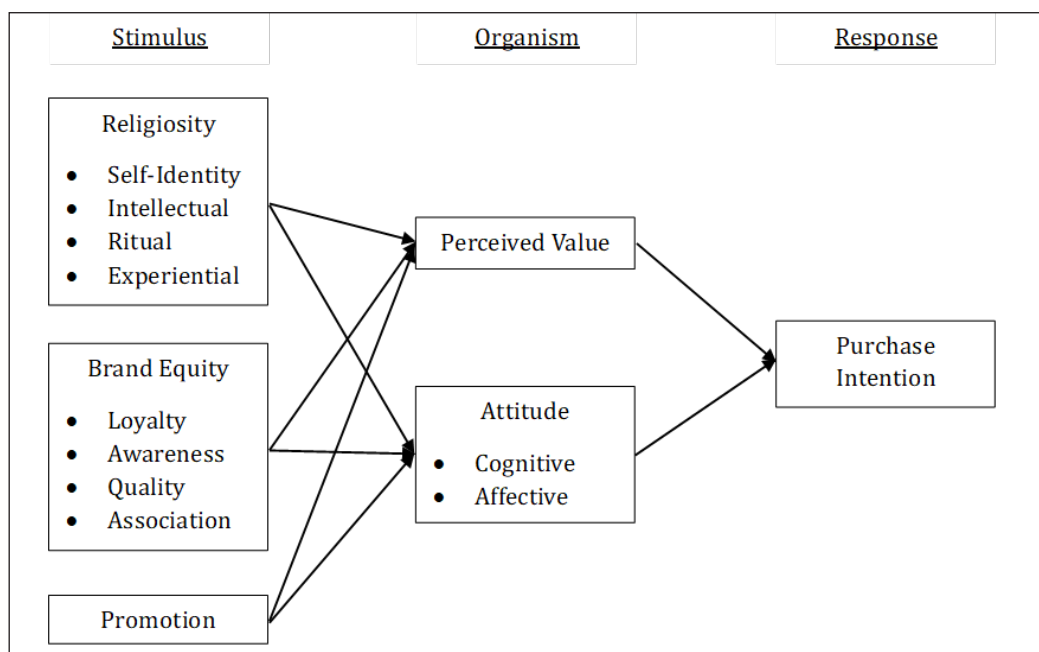


Figure 1. S-O-R framework

questionnaire, distributed via Google Forms, was administered using a convenience random sampling method. Two hundred sixty-seven responses were gathered. Upon data tabulation and cleaning to filter damaged data and outliers, 251 responses were obtained for data analysis (94.01%). The respondents represented a diverse age range, with 25% in their late twenties (27–30 years), 30% in their early thirties (31–35 years), 28% in their late thirties (36–40 years), and 17% in their early forties (41–42 years). Most participants were employed full-time (72%), while 20% held part-time positions, and 8% were self-employed. Nearly half (45%) held a bachelor's degree, 25% had completed a diploma, 20% possessed a master's degree or higher, and 10% had only a high school education. Regarding marital status, 35%

were single, 55% married, and 10% divorced or widowed. Income levels varied, with 10% earning less than RM3,000, 40% earning between RM3,000 and RM5,000, 30% making between RM5,001 and RM7,000, and 20% earning over RM7,000. Finally, regarding employment sectors, 40% worked in the public sector, 50% in the private sector, and 10% in non-governmental organisations.

Instrument

Three exogenous variables are used in this study, namely, Religiosity (RE), Brand Equity (BE), and Promotion (PR). Perceived Value (PV) and Attitude (ATT) become the mediating variables, and Purchase Intention (PI) becomes the dependent variable. The measurement of each variable is adapted from previous studies. RE is adapted from

Iranmanesh et al. (2019) and Said et al. (2014). BE is adapted from Ali et al. (2017), and G. C. Lee and Leh (2011). PR is adapted from Al-Dmour et al. (2022) and Kara and Yaprakli (2017). Meanwhile, PV is adapted from Handriana et al. (2020) and ATT from Suparno (2020). Ultimately, PI is adapted from Handriana et al. (2020). Three question items were utilised for each variable, as shown in Table 1.

Table 1
Questionnaire items and measurement model

Variable and Indicator	Outer Loading	Cronbach Alpha	Composite Reliability	AVE
<i>Purchase Intention</i>				
I intend to buy halal cosmetic products in the future	0.946	0.964	0.977	0.934
I will choose halal cosmetic products in the future	0.985			
I will fulfil my cosmetic needs by buying halal cosmetic products	0.967			
<i>Religiosity</i>				
I think of myself as a user of halal cosmetic products	0.783	0.926	0.939	0.578
Using halal cosmetic products is an important part of my life as a Muslim	0.775			
Using halal cosmetic products fit with the kind of Muslim	0.870			
I want to be	0.167			
I am moderately religious	0.807			
I consume halal food for my religion	0.561			
I pray more than five times a day	0.768			
I read the products' labels to ensure the products are halal	0.813			
I look for the Halal logo when buying halal cosmetic products	0.793			
I seek advice from others to buy Halal cosmetic products	0.789			
Islam answers many questions about the meaning of life				
I alert my family and friends to the halalness of any cosmetic products	0.842			
I use halal cosmetic products that many Muslim customers use	0.871			
<i>Brand Equity</i>				
I prefer halal cosmetic products to other cosmetic products	0.851	0.969	0.972	0.746
I recommend halal cosmetic products to others	0.895			
I intend to pay even more for halal cosmetic products than for other cosmetic products	0.794			
I am aware of halal cosmetic products	0.891			
I can recognise halal cosmetic products among other cosmetic products	0.774			
I can quickly recall the logo of halal cosmetic products	0.826			
I think halal cosmetic products are of very good quality	0.923			
I think halal cosmetic products have consistent quality	0.931			
I think the features of halal cosmetic products are excellent	0.923			
I consider the company and people behind halal cosmetic products to be experts in producing the products	0.913			
I believe halal cosmetic products are safe to be used	0.851			
I believe halal cosmetic products are well-priced	0.772			

Table 1 (continue)

Variable and Indicator	Outer Loading	Cronbach Alpha	Composite Reliability	AVE
<i>Promotion</i>				
I am willing to buy halal cosmetic products when discounts are given	0.882	0.828	0.896	0.743
I am willing to buy halal cosmetic products when they are advertised in mass media (TV, radio, social media)	0.886			
I am willing to buy halal cosmetic products if there is a celebrity in the advertisement	0.816			
<i>Perceived Value</i>				
I think halal cosmetic products are reliable	0.953	0.958	0.973	0.923
I think halal cosmetic products have good functions	0.971			
I think halal cosmetic products fulfil my needs well	0.958			
<i>Attitude</i>				
I think halal cosmetic products are practical	0.881	0.960	0.968	0.834
I think halal cosmetic products are necessary	0.891			
I think halal cosmetic products are functional	0.909			
I think halal cosmetic products are fun	0.899			
I think halal cosmetic products are exciting	0.946			
I think halal cosmetic products are enjoyable	0.951			

Analysis Technique

This study conducted data analysis using partial least squares (PLS) based on structural equation modelling (SEM) with SmartPLS 4.0. PLS-SEM technique offers significant value to this study as it allows the understanding of the constructs of the latent variable, either reflective or formative; processes multivariate data to comprehend the relationship between latent variables within a complex model; and makes it possible to run small data size through bootstrapping method (Ramayah et al., 2018). Thus, considering the complex model, PLS-SEM is very appropriate for this study.

Under PLS-SEM, there are two major steps: (1) measurement model and (2) structural model (Hassan et al., 2020). The measurement model verifies the presented

model involving reliability, convergent validity, and discriminant validity, whereas the structural model tests the relationship between the latent variables (Ramayah et al., 2018). In the structural model, this study would test the direct relationship between RE, BE, and PR with PI of halal cosmetics. A mediation test is also conducted to measure the mediating impact of PV and ATT on the relationship between the independent and dependent variables.

RESULTS AND DISCUSSION

Measurement Model

The results of the measurement model in Table 1 show that all variables have good internal consistency with Cronbach's Alpha (CA) above 0.7 as suggested by Hair et al. (2010) and Composite Reliability

(CR) above 0.7 as suggested by Gefen et al. (2000). The convergent validity of all variables also shows that the measurement items used is valid with the Average Variance Extracted (AVE) above 0.5 as suggested by Hair et al. (2017). Questionnaire items with factor loadings below 0.7 are discarded before proceeding with structural analysis, as suggested by Hair et al. (2017). The VIF of all variables is also below 5, indicating no multicollinearity issue. The discriminant validity of all variables passes Fornell and Larcker's (1981) criteria and cross-loading criteria and Ramayah et al. (2018).

Structural Model

Five thousand sub-samples are bootstrapped for structural model analysis, according to Ramayah et al. (2018). Referring to Table 2, there is a significant and positive influence of RE on PI, as the *t*-value equals 2.273 (above 1.96), as suggested by Hair et al. (2017). The *F*², however, equals 0.137, denoting that RE has a small effect size if it is to be discarded from the model. The beta coefficient equals 0.366, indicating that a change in RE accounts for 36.6% of the variation in purchase intention for halal cosmetic products. Thus, H1 is accepted.

However, the results show that BE has no significant influence on PI as the *t*-value is 0.075 (below 1.96). The *F*² accounts for 0.000, denoting no effect size at all. The beta coefficient equals 0.015, showing that a change in BE only affects a 1.5% change in the purchase intention of halal cosmetic products. Thus, H2 is rejected.

Lastly, PR is found to have an insignificant negative relationship with PI. The *t*-value equals 0.896 (below 1.96). Meanwhile, the beta coefficient is -0.156, indicating that promotion has an adverse effect on the purchase intention of halal cosmetic products. The *F*² is also only 0.031, indicating a small effect size. Thus, H3 is rejected.

Mediation Test

Referring to Table 3, there is no significant indirect effect of PV as the mediator between all exogenous variables (RE, BE, and PR) and endogenous variables (PI). PV is found to have no mediation effect between RE and PI as the *t*-value equals 0.070 (below 1.96). The confidence interval also shows that the lower and upper limits straddle between 0, indicating no significant mediation effect (Preacher & Hayes, 2008). The VAF of 0.9%

Table 2
Structural model

Hypothesis	Relationship	Beta Coefficient	Standard Deviation	T-Value	F ²	Result
H1	RE → PI	0.366	0.161	2.273**	0.137	Accepted
H2	BE → PI	0.015	0.206	0.075	0.000	Rejected
H3	PR → PI	-0.156	0.174	0.896	0.031	Rejected

Table 3
Mediation test

Hypothesis	Relationship	Beta Coefficient	T-Value	Confidence Interval (Bias Corrected)		Result	VAF
				Lower limit	Upper limit		
H4	RE → PV → PI	0.003	0.070	-0.070	0.138	Rejected	0.009
H5	BE → PV → PI	0.185	0.819	-0.213	0.665	Rejected	0.925
H6	PR → PV → PI	0.026	0.484	-0.035	0.236	Rejected	-0.198
H7	RE → ATT → PI	0.106	0.898	-0.032	0.433	Rejected	0.225
H8	BE → ATT → PI	0.122	1.264	-0.003	0.429	Rejected	0.891
H9	PR → ATT → PI	0.202	1.508	-0.020	0.533	Rejected	4.421

also indicates there is no mediation effect (Hair et al., 2011).

The indirect relationship of BE and PI also shows no significant mediation effect of PV as the *t*-value equals 0.819 (below 1.96) and the confidence interval straddles 0. However, the VAF value of 92.5% indicates a full mediation effect. The same goes for the indirect relationship of PR and PI, as the *t*-value equals 0.484 (below 1.96), and the confidence interval straddles 0. The VAF value of -19.8% also shows no PV mediation effect between PR and PI. Thus, H4, H5, and H6 are rejected.

Besides, the results also show no significant mediation effect of ATT. First, there is no significant indirect effect between RE and PI as the *t*-value equals 0.898 (below 1.96) and the confidence interval straddles 0. However, the VAF value of 22.5% indicates a partial mediation effect. The same goes for the relationship between BE and PI; the *t*-value equals 1.264 (below 1.96), and the confidence interval straddles 0. However, the VAF value of 89.1% indicates a full mediation effect. Lastly, there is no

significant indirect effect of ATT between PR and PI as the *t*-value equals 1.508 (below 1.96) and the confidence interval straddles 0. The VAF value of 442.1%, however, indicates full mediation impact. Thus, H7, H8, and H9 are rejected.

CONCLUSION

The empirical findings indicate that religiosity has a significant and positive impact on the purchase intention of halal cosmetic products. Indeed, religiosity causes customers to opt for halal-certified cosmetic products, as evidenced by Haque et al. (2018) and Suparno (2020). This indicates that religion may reflect one's lifestyle, including consumption behaviour. Therefore, to encourage more purchases of halal cosmetic products, cosmetics must incorporate religious elements into their marketing efforts, such as highlighting the religious benefits of choosing halal cosmetic products.

Nurraysa, a Malaysian halal cosmetic brand, attracts Muslim attention by stating that the products incorporate only halal

ingredients and, thus, could be applied during prayer. It also emphasises that the products could be removed easily with water (without makeup remover), easing Muslim cosmetics users to remove them in the absence of makeup remover if they prefer to be bare-faced for prayer. Wardah Beauty, an Indonesian halal cosmetic brand, has also demonstrated this idea through the appointment of majority-Muslim and hijab-wearing ambassadors, such as Ayana Jihye Moon (South Korea), Dinda Haw (Indonesia), Zainab Al-Eqabi (Iraq), and many more. This has successfully positioned these brands as a cosmetic brand for Muslims that advocates the empowerment of the Muslim community through halal products and brand messages. Thus, halal cosmetic companies can properly disseminate the value proposition of being a halal product that satisfies the needs of Muslims. This highlights the competitive advantage that halal cosmetic products have over the countless non-halal certified products to induce Muslims to choose them.

On the other hand, brand equity and promotion are found to have no significant impact on the purchase intention of halal cosmetic products. Since religiosity significantly contributes to consumers' intention to purchase halal cosmetic products, the religious value offered may outweigh the other factors affecting their consumption. Consumers tend to overlook brand awareness, loyalty, association, and product quality associated with brand equity, as the religious value proposed by the products could influence the overall consumer's perception of the products

(Liu & Minton, 2018). This goes by the signalling theory in marketing wherein the quality perception of the products could be signalled through communicating the core value, which, in this case, the halal branding of the cosmetic brands could manipulate the impression of the brands for having good quality products (Connelly et al., 2011, as cited in Liu & Minton, 2018). The same applies to promotion, as consumers seeking halal cosmetics to fulfil their religious commitments would dismiss the discount and marketing factors related to promotion, as the benefits gained from the halal products surpass the price paid, and the marketing means to induce the purchase of the products. This parallels the study by Syukur and Nimsai (2018), which found that promotion and price do not significantly affect the purchase intention of halal food in Thailand.

Besides, attitude is found not to have any significant mediation impact between the exogenous and endogenous variables. This defies the findings of the previous studies on halal cosmetics' purchase intention by Septiarini et al. (2022) and Anubha (2021) but confirms the findings by Devani and Puspawati (2023). This denotes that a good attitude toward halal cosmetic products does not indirectly induce the intention to purchase the products. For religiosity, if halal cosmetic products could fulfil their religious needs, they might automatically have a good attitude toward the products. Thus, attitude is not a matter of mediation that can manipulate the effect of external factors on purchase intention, as the impact of religiosity outweighs the other factors.

The same goes with perceived value, as consumers with high religiosity tend to automatically have positive perceived value when it comes to halal cosmetics through the expected benefit they would be receiving.

Implications of the Study

This study provides several significant theoretical and practical contributions by extending the applicability of the Stimulus-Organism-Response (SOR) model to the halal cosmetics market. From a theoretical perspective, the findings illustrate how religiosity functions as a dominant stimulus, directly influencing purchase intention without requiring mediation through internal processes like attitude or perceived value. This finding enhances the SOR model by demonstrating its adaptability to contexts where religious and ethical considerations override conventional marketing stimuli, such as brand equity and promotion. Traditional marketing theories often emphasise the importance of brand image, loyalty, and promotional strategies in influencing consumer behaviour (Hayes, 2024; N. Khan et al., 2020). However, the results of this study suggest that in religiously sensitive markets like halal cosmetics, these conventional stimuli may be secondary to the faith-based values driving consumer choices. This observation supports the need to revise the SOR framework to incorporate faith-driven stimuli as primary drivers, especially in markets where religious adherence shapes consumer identity and behaviour.

Practically, the study highlights the importance of leveraging religiosity as a core component of marketing strategies. It offers actionable insights for marketers and policymakers aiming to enhance consumer engagement and trust in halal products. The research findings show that religiosity only has a significant impact on the purchase intention of halal cosmetic products; meanwhile, brand equity and promotion have proven to have none. The same goes for attitude and perceived quality, which shows no mediation impact between the exogenous and endogenous variables. This presses the idea that religious elements should be included within the marketing strategy as it highlights the core value proposition of the products for being halal-certified to garner the right market and boost sales growth. For halal cosmetic brands, prioritising halal certification, transparent, ethical sourcing, and strict adherence to Islamic principles are essential for building emotional resonance and cognitive trust with consumers. These strategies not only enhance brand credibility but also align with the deeply held values of the target demographic, fostering greater loyalty and purchase intention. This research underscores the important role of religiosity as a critical driver in consumer decision-making, offering valuable insights for Malaysian halal cosmetic brands to navigate an ethically conscious and competitive market. By leveraging religiosity as a signalling mechanism, brands can differentiate themselves by demonstrating authenticity, ethical commitment, and alignment with Islamic principles.

From a policy perspective, this research advocates for establishing comprehensive guidelines that promote the integration of religious values in marketing practices for halal cosmetics. Policymakers, specifically JAKIM and the Ministry of Health should prioritise developing frameworks to ensure that Halal cosmetics ingredients comply with Halal standards. JAKIM, alongside the Ministry of Health, must establish clear regulations for halal certification and enhance awareness of the importance of halal compliance among manufacturers and consumers. By fostering collaboration between these entities and supporting initiatives that educate brands on halal certification and the significance of religiosity in consumer behaviour, they can encourage marketing campaigns that emphasise halal compliance. This approach will build trust and confidence among Muslim consumers and position halal cosmetics as a credible choice for a wider audience. It will give brands a significant marketing advantage in differentiating their products in a competitive marketplace.

Limitations and Recommendations

The research findings open several potential discussions to be addressed in the future. First, this research is carried out in Malaysia's halal cosmetic sector, specifically on Kuala Lumpur residents; thus, later research could integrate the same model in the context of different areas and regions to obtain new outcomes. Second, the respondents in this study were Muslim working women aged 27 to 42 years old; hence, it would be interesting

to obtain the responses of different age groups with varying employment statuses to observe their reactions toward halal cosmetic products. Third, since attitude and perceived value show no significant mediation impact, future research might apply the moderating effect instead of mediation to prove the relevance of these variables in halal cosmetics' purchase intention.

ACKNOWLEDGEMENTS

This research was supported by Universiti Tun Hussein Onn Malaysia (UTHM) through Tier 1 (Vot Q364). We extend our deepest gratitude to the Research Management Centre of Universiti Tun Hussein Onn Malaysia for their indispensable assistance and unwavering support throughout the publication. Their collective support has been instrumental in advancing our work, and we are profoundly grateful for their contributions.

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Penandaan Bernombor Bahasa Semai di RPS Betau, Pahang: Satu Analisis Sintaksis

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ABSTRAK

Kajian ini menumpukan kepada penandaan bernombor digunakan oleh Kata Ganti Nama Diri (KGND) dalam bahasa Semai. Leksikal yang berbeza yang digunakan oleh penutur untuk menggambarkan bilangan subjek dalam ayat. Kajian ini menggunakan kaedah kuantitatif; melalui temu bual semi struktur dengan penduduk bahasa Semai di RPS Betau, Sungai Koyan, dan kualitatif; menggunakan pendekatan teori Program Minimalis. Data kajian dibersihkan bersama penutur bahasa Semai, kemudian dianalisis dengan menggunakan Program Minimalis untuk mengkaji leksikal ke peringkat minimal. Analisis kajian dijelaskan secara deskriptif melalui rajah pohon untuk menjelaskan peranan penandaan bernombor bahasa Semai. Hasil kajian mendapati bahawa penandaan bilangan bahasa Semai untuk KGND Pertama dan Ketiga memiliki leksikal tersendiri yang menandakan subjek tunggal tanpa menggunakan nombor. Meskipun tanpa makna semantik, kehadiran penandaan ini penting untuk menggambarkan bilangan subjek dalam ayat. Kajian ini membincangkan struktur ayat bahasa Semai dengan penandaan bernombor, diperlihatkan melalui huraian rajah pohon yang memaparkan pergerakan penandaan tersebut. Hasil kajian ini diharapkan dapat membantu pengkaji linguistik memahami bahasa Semai dengan lebih menyeluruh.

Kata kunci: Bahasa Orang Asli, penandaan bernombor, program minimalis, Semai, sintaksis

ARTICLE INFO

Article history:

Received: 03 November 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.05>

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The Numbered Marking of Semai Languages at RPS Betau: A Syntax Analysis

ABSTRACT

This study focuses on the numerical markers used by Pronouns in the Semai language. It explores

the various lexical items employed by speakers to describe the number of subjects in sentences. The research employs both quantitative and qualitative methods, conducting semi-structured interviews with Semai speakers in RPS Betau, Sungai Koyan, Pahang, emphasising everyday conversations, and utilising the theoretical framework of the Minimalist Program. The research data is cleaned with the input of Semai speakers and analysed using the Minimalist Programme to examine lexical forms at a minimal level. The analysis of the study is described descriptively through tree diagrams to illustrate the role of numerical markers in Semai language. The study findings reveal that the Semai language's numerical marking for first- and third-person pronouns possess their lexical forms, indicating singular subjects without using numbers. Although devoid of semantic meaning, the presence of these markers is crucial in depicting number in sentences. This study discusses the sentence structure of the Semai language with numerical markers, demonstrated through tree diagram analysis, illustrating the movement of these markers. The results of this study are expected to aid linguists in comprehensively understanding the Semai language.

Keywords: Indigenous people language, minimalist programme, numbered markup, Semai, syntax

PENGENALAN

Perbincangan penandaan bernombor telah banyak dilakukan oleh pengkaji linguistik (Bale & Khanjian, 2008; Brickell, 2014; Gulö & Rahmawelly, 2019; Hallberg & Niehorster, 2021; Ngullie & Khyriem, 2024; Von Heusinger & Kornfilt, 2017), yang membincangkan penggunaan leksikal tertentu bagi memberikan penandaan bernombor dalam struktur ayat dalam kajian masing-masing. Penandaan bernombor merujuk kepada fenomena bahasa yang menunjukkan bilangan subjek dalam ayat menggunakan leksikal mahupun apitan. Kajian-kajian tersebut menumpukan kepada fungsi penandaan bernombor yang hanya hadir sebagai penanda bernombor selepas Kata Nama (KN) atau Kata Kerja (KK) sahaja. Walau bagaimanapun, suku kaum Orang Asli Senoi, terutamanya Semai, telah mempunyai buku teks tatabahasa bahasa Semai yang memberikan perbincangan baharu kepada sifat penandaan bernombor

yang berbeza daripada dapatan sarjana terdahulu. Jumlah penutur bahasa Semai 97,956 orang semestinya akan menghasilkan varian struktur ayatnya berdasarkan geografi penutur yang berada di Pahang dan Perak (Jabatan Kemajuan Orang Asli, 2023). Hal ini membolehkan bahasa Semai berubah mengikut peredaran masa kerana mempunyai sifat yang dinamik dan dapat berkembang dari aspek sistem dan struktur (Alias, 2016). Tambahan pula, pada data kajian, wujud leksikal yang tiada makna semantik, namun berdasarkan perbualan bersama penutur natif bahasa Semai, leksikal tersebut berkait rapat dengan jumlah subjek dalam ayat. Jumlah subjek dalam ayat bergantung kepada penggunaan leksikal tersebut, sama ada tunggal mahupun jamak. Maka, kajian ini menganalisis penggunaan leksikal yang masih tidak diketahui fungsinya dalam struktur sintaksis bagi menunjukkan maknanya dalam sistem perbincangan tunggal mahupun jamak,

berdasarkan ulasan yang diberikan oleh penutur bahasa Semai di Pahang.

KAJIAN LEPAS

Kajian lepas yang dipilih membantu pengkaji melihat fenomena penandaan bernombor dalam bahasa lain. Bahagian ini akan membahagikan kajian lepas kepada subkategori seperti berikut:

Konsep Penandaan Bernombor

Antara kajian lepas yang dirujuk ialah kajian penandaan bernombor oleh Gulö dan Rahmawelly pada tahun 2019. Penulisan ini mengkaji pengguguran apitan akhiran -s semasa menulis ayat bahasa Inggeris bagi menggambarkan Kata Kerja (KK) dalam ayat dilakukan oleh seorang pelaku. Penggunaan apitan -s yang diapit bersama KK menunjukkan wujud penandaan bernombor dalam bahasa Inggeris juga memberi maklumat kepada pendengar bahawa kala yang diberikan bersama apitan -s merupakan kala kini (ayat 1 dan ayat 2). Ayat berikut menunjukkan contoh mengenai penggunaan apitan -s bagi KK yang mempunyai subjek tunggal dan tanpa -s bagi subjek jamak:

1. *My father always supports me.*
2. *He wears glasses.*
3. *They go to the zoo.*

Penggunaan penandaan bernombor dalam bahasa berbeza mengikut keperluan bahasa tersebut, seperti bahasa Arab, penggunaan penanda bernombor turut

mempunyai fitur jantina bersamanya untuk membezakan tunggal dan jamak mengikut jantina bagi Kata Ganti Nama Diri (KGND) kedua dan ketiga. Seperti bahasa Inggeris, penandaan bernombor dalam bahasa Arab turut membawa fitur kala kini bersamanya. Hallberg dan Niehorster (2021) telah mengulas mengenai penandaan bernombor dalam bahasa Arab pada ayat-ayat seperti berikut:

4. المعلم يذهب إلى الفصل

al-	mu'alim	ya-	zhabu
DEF	guru (L)	Tung.	pergi

ila	al-	fasl
ke	DEF	kelas

“Seorang guru lelaki pergi ke kelas.”

5. المعلمة تذهب إلى الفصل

al-	mu'alim	ya-	zhabu
DEF	guru (L)	Tung.	pergi

ila	al-	fasl
ke	DEF	kelas

“Seorang guru lelaki pergi ke kelas.”

6. المعلمون يذهبون إلى الفصل

al-	mu'alim-una	ya-	zhabu-na
DEF	guru(L) Jama.	Kala.	pergi-Jama.

ila	al-	fasl
ke	DEF.	kelas

“Ramai guru lelaki pergi ke kelas.”

Ayat 4 dan 5 merupakan ayat yang mempunyai subjek tunggal namun ekoran

daripada perbezaan jantina, penggunaan penanda bernombor berbeza diapitkan bersama KK tak transitif dengan menggunakan apitan awalan *ya* bagi lelaki atau *ta* bagi perempuan. Namun begitu, bagi ayat 6, subjek jamak mempunyai apitan awalan dan akhiran pada KK berikut untuk memberikan gambaran bahawa subjek dalam ayat adalah jamak. Perbincangan mengenai penanda bernombor dalam bahasa Arab memberikan panduan kepada kajian ini untuk menganalisis sekiranya penandaan bernombor dalam bahasa Semai juga mempunyai perbezaan leksikal mengikut leksikal KGND yang digunakan.

Umumnya, penandaan bernombor dalam ayat bersifat sufiks dan diapit bersama KK seperti bahasa Inggeris. Faye (2023) mengulas bahawa penandaan bernombor bagi elemen tunggal dalam bahasa Inggeris mempunyai ciri sufiks yang berapit dengan KK seperti *-s*, *-es* dan *-ies* bagi bentuk biasa, namun sekiranya digunakan bersama KN, maka leksikal akan bertukar fungsinya kepada jamak. Penggunaannya juga berbeza mengikut fonem konsonan terakhir pada leksikal dalam bahasa Inggeris.

Penggunaan penanda bernombor ini memberikan maklumat bahawa pelaku bagi KK dalam ayat merupakan pelaku tunggal dan ketiadaan apitan kepada KK menunjukkan bahawa pelakunya adalah jamak. Begitu juga sekiranya apitan akhiran tersebut hadir pada KN menggambarkan bahawa pelaku atau objeknya membawa fungsi jamak dan ketiadaannya pada KN membawa maksud tunggal. Bagi penandaan bernombor ini, kala yang diberikan ialah *default* kala kini, berbeza dengan kala

berterusan yang menambah apitan *-ing*. Walau bagaimanapun, apitan sufiks *-ing* digunakan oleh pelaku tunggal dan jamak, maka apitan tersebut tidak dianggap sebagai penandaan bernombor (Faye, 2023). Fungsi penanda bernombor adalah sebagai penentu kuantiti dalam ayat untuk merujuk kepada subjek bagi ayat yang dituturkan. Contoh penggunaan bagi apitan dalam bahasa Inggeris adalah seperti ayat berikut:

7. She eats apples.

Subjek *she* dalam ayat merujuk kepada KGND ketiga tunggal perempuan yang menjadi kepala bagi ayat di atas. Penandaan bernombor kemudiannya berlaku kepada KK *eat-s* dan KN *apple-s*, yang keduanya menggunakan apitan *-s*, namun membawa fitur berbeza. KK *eat-s* merujuk kepada subjek yang tunggal, manakala *apple-s* merujuk kepada objek yang jamak. Maka, penggunaan penandaan bernombor memberikan maklumat mengenai kuantiti pelaku atau objek dalam ayat.

Dalam bahasa Arab, seperti yang dibincangkan oleh Jaradat (2023), penanda bernombor bagi bahasa Arab diapit bersama KN secara sufiks atau akhiran suatu leksikal. Walau bagaimanapun, kala kini dalam bahasa Arab menambah huruf pada awal leksikal KK bagi pelaku tunggal dan awal serta akhir bagi pelaku jamak. Keadaan ini menjadikan penanda bernombor dalam bahasa Arab membawa fitur jamak dan kala pada apitan awal dan akhir sekiranya diapit bersama KK. Ayat-ayat yang mempunyai penanda bernombor dalam bahasa Arab dapat dilihat pada ayat berikut:

8. طالب يأكل التفاحة

talib	ya-	kul
murid	Tung.	makan

al-	tufaaha	-tan
DEF	epal	Tung.

“Seorang pelajar makan sebiji epal.”

9. طالبين يأكلان التفاحتين

talib-	in	ya-	kul	-ani
murid	Dual	kala.	makan	Dual

al-	tafaaha	-tayn
DEF	epal	Dual

“Dua orang pelajar makan dua biji epal.”

10. طلاب يأكلون التفاح

tulaab	ya-	kul
murid(Jamak)	kala.	makan

-una	al-	tufaah
Jama.	Def	epal(JamaK)

“Ramai pelajar makan banyak epal.”

Ayat 8, 9 dan 10 merupakan ayat dalam bahasa Arab yang menggunakan penandaan bernombor pada KN dan KK. Subjek *talib* yang merujuk sebagai subjek bagi ayat 8 merupakan subjek tunggal bermaksud *seorang pelajar*, namun apabila subjek membawa kuantiti jamak, maka dalam bahasa Arab, perubahan fonem pada tengah ayat berubah kepada *tulaab* membawa maksud *ramai pelajar* pada ayat 1). Dalam bahasa Arab, berlaku fenomena, iaitu perubahan jamak sesuatu

leksikal dipengaruhi oleh bilangan huruf dalam leksikal tersebut, maka, wujud unsur KN tetap dan KN tak tetap untuk penggunaan jamak bagi leksikal dalam bahasa Arab. Sama seperti subjek, objek dalam ayat juga berubah daripada tunggal *al-tufaaha-tan* yang bermaksud *sebiji epal* bagi ayat 8 kepada jamak *al-tufaah* bagi ayat 10. Unikunya pada bahasa Arab, berlaku fenomena yang membawa kepada kuantiti dua seperti ayat 9, subjeknya *talib-in* bagi *dua orang pelajar* dan objeknya *al-tafaaha-tayn* bermaksud *dua biji epal*. Bagi KK pula, ayat 8 *ya-kul* memberikan gambaran bahawa pelaku dalam ayat merupakan subjek tunggal, dan penanda nombor tersebut turut membawa fitur kala kini bersamanya. Berbeza dengan ayat 9 dan 10, apabila kuantiti subjek adalah dua ataupun jamak, maka apitan *ya-* berubah menjadi kala kini ekor daripada apitan akhir *-ani* dan *-una* yang menjadi penanda bernombor bagi KK ayat 9 dan 10 masing-masing. Berdasarkan fenomena dalam bahasa Arab mengenai penandaan bernombor, satu persoalan perlu dijawab dalam kajian ini: Adakah wujud penandaan bernombor mengikut bilangan subjek atau objek ataupun penandaan bernombor mempunyai keseragaman seperti dalam bahasa Inggeris?

Kajian tambahan oleh Kirby dan Sevgi (2023) mengenai penandaan bernombor dalam bahasa Turki juga perlu dibincangkan apabila mengkaji mengenai posisi penandaan bernombor bahasa Semai. Penggunaan penandaan bernombor apitan akhiran *-lar* merujuk kepada jamak sekiranya diapit bersama KN. Namun begitu, penggunaan apitan akhiran *-lar* berbeza mengikut

dialek Turki, seperti dialek Sakha, antara dialek bahasa Turki, penggunaan apitan *-lar* merujuk kepada tiga orang secara langsung namun secara umumnya, *-lar* membawa maksud jamak yang tidak boleh dikira dalam bahasa Turki formal. Ayat berikut menunjukkan penggunaan apitan *-lar* dalam bahasa Turki:

11. bizim çocuklarımız evde oynuyor

bizim	çocuk	-lar	-ım	-ız
kami	anak-anak	Jama.	1P	PLP
ev-	de	oynu	yor	
rumah	di	bermain	kala.	

“Anak-anak kami bermain di rumah.”

Berdasarkan ayat 11, penggunaan penandaan bernombor *-lar* diapit bersama KN untuk memberikan maksud jamak bagi *çocuk* yang asalnya merupakan *anak*, namun apabila diapit menjadi *çocuk-lar*, maka perubahan makna juga berubah kepada *anak-anak* yang membawa kepada kuantiti jamak. Kirby dan Sevgi (2023) juga memberikan panduan rajah bagi penggunaan apitan *-lar*. Menurut beliau, apitan *-lar* yang diapit bersama leksikal *on* dan KGND ketiga *-in* berada di bawah payung Frasa Determiner (DP) yang meninggalkan bekas di bawah Determiner (D) ditarik melangkaui Determiner’ (D’). KN *at* bermaksud *kuda* pula kekal di bawah Frasa Nama (FN). Oleh yang demikian, berdasarkan kajian bahasa Turki ini, difahami bahawa penandaan bernombor merupakan apitan sufiks, atau apitan akhiran, sama seperti bahasa Inggeris. Perkara ini membantu pengkaji

untuk menganalisis kedudukan penandaan bernombor bahasa Semai dalam membina ayat yang lengkap dalam bahasa Semai.

Walaupun bagaimanapun, wujud perbincangan mengenai penandaan bernombor yang hanya dapat melekat pada subjek dan bukan objek, dan turut berada di bawah perbincangan Frasa Agreement (FAgre). Perbincangan ini diulas oleh Eberhard (1997) bahawa agremen subjek tunggal diimplementasi secara *default*, manakala agremen subjek jamak diberikan berdasarkan maklumat bernombor tidak khusus. Agremen yang dimaksudkan tidaklah berapit secara sufiks atau anaforiks bersama subjek, namun hadir sebagai leksikal. Agremen penandaan juga tidak diberikan kepada objek kerana Keserasian antara agremen dengan objek adalah samar-samar dan kurang berlaku berbanding agremen bersama subjek, padanan tersebut menjanjikan pematuhan tatabahasa kepada KK dan pembunyian fonologi lebih cenderung melibatkan subjek berbanding objek (Siewierska, 1999). Sehubungan itu, kehadiran penandaan bernombor dalam bahasa Semai yang hadir selepas KN dan sebelum KK menjadi isu kepada Keserasian yang sesuai untuk memadamkan agremen penandaan bernombor tersebut. Oleh yang demikian, kajian ini cenderung untuk meperlihatkan posisi dan fungsi penandaan bernombor dalam bahasa Semai.

Konsep Sintaksis Program Minimalis

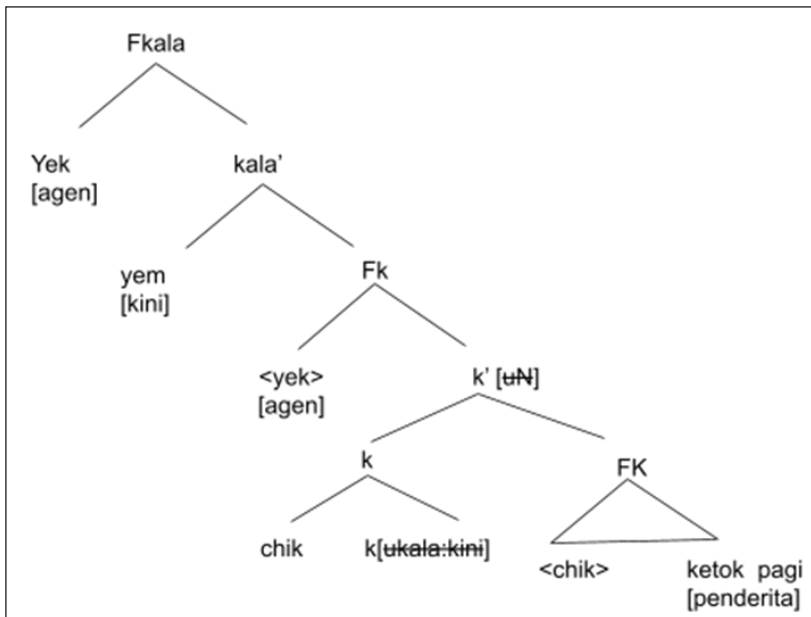
Kajian bahasa Orang Asli Bateq yang dijalankan oleh Ropiah et al. (2023) yang mengaplikasikan teori Program

Minimalis, menggunakan rajah pohon untuk menerangkan penggunaan *sedang* dalam bahasa Bateq dengan jelas seperti Rajah 1.

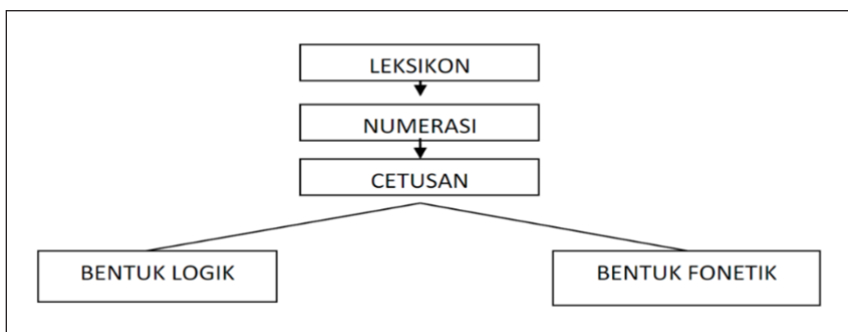
Kajian lepas mengenai bahasa Orang Asli Negrito suku kaum Bateq membantu pengkaji untuk membentuk rajah pohon bagi mengulas mengenai bahasa Semai yang menjadi fokus kajian ini. Seperti kajian Ropiah et al. (2023), rajah pohon ini menunjukkan pergerakan subjek *yek* yang bergerak daripada posisi Fk, meninggalkan bekas untuk menjadi kepala dalam ayat ini. Kedua-dua *yek* dan *yem* merupakan KGND pertama, namun dalam ayat ini, sekiranya posisi *yek* hadir sebelum *yem*, maka *yem* berubah fungsi menjadi *sedang* dalam ayat. Oleh yang demikian, penggunaan rajah pohon membantu kajian mengenai struktur ayat dengan baik kerana penggunaannya

mbolehkan pengkaji melihat pergerakan setiap leksikal ke posisi yang ditetapkan.

Penganalisan Program Minimalis (PM) yang ditulis oleh Chomsky (2015) juga menjadi rujukan pengkaji untuk membincangkan penulisan ini kerana penggunaan PM yang menganalisis struktur ayat hingga ke peringkat minimal membantu penghuraian data bahasa Semai bagi mengenal pasti fitur-fitur yang ada pada leksikal bahasa Semai. Kajian-kajian mengenai struktur ayat bahasa Orang Asli juga menggunakan pendekatan sintaksis yang sesuai untuk menganalisis ayat secara tersusun dan menyeluruh. Tatabahasa Generatif (TG) melalui pendekatan PM yang dianjurkan oleh Chomsky (1995) merupakan antara pendekatan yang menunjukkan representasi menerusi rajah



Rajah 1. Penggunaan rajah pohon bagi menerangkan struktur ayat bahasa Bateq (Sumber: Ropiah et al., 2023)



Rajah 2. Kerangka asas program minimalis (Sumber: Sultan et al., 2011)

pohon yang menerangkan bentuk ayat sehingga ke peringkat minimal. Representasi yang dipamerkan oleh PM membantu menjelaskan fitur-fitur yang terlibat dalam pembinaan ayat (Sultan et al., 2011). Kerangka asas PM adalah berdasarkan Rajah 2.

PM yang mengandaikan bahawa leksikal yang wujud secara lahiriah dalam leksikon manusia dapat dikelaskan mengikut fitur masing-masing. Proses operasi sintaksis kemudiannya berterusan kepada peringkat numerasi, yang menyuaikan leksikal bersesuaian dari bentuk logik dan fonetik untuk dipadankan dalam ayat. Maka, kajian bahasa Orang Asli dengan menggunakan PM dapat membantu kajian ini mengenal pasti penandaan bernombor dalam bahasa Semai. Penerangan setiap ayat dalam bahasa Semai sehingga ke peringkat minimal dapat memandu pengkaji mengenal pasti penandaan bernombor dalam ayat bahasa Semai, seterusnya membincangkan penggunaan dan fungsinya dalam ayat. Seperti yang ditegaskan oleh Zawawi et al. (2022), struktur sintaksis bahasa perlu diterangkan sehingga peringkat minimal

untuk memahami setiap fungsi leksikal dalam ayat.

Maka, pendekatan teori yang baik dapat menerangkan struktur ayat bahasa Semai yang menggunakan penandaan bernombor yang belum ditandai dengan baik.

METODOLOGI

Kajian ini ingin memberikan tumpuan kepada perbincangan penandaan bernombor bahasa Semai di Pahang menggunakan pendekatan Program Minimalis (PM) dan penerangan deskriptif bagi menghuraikan fungsi penandaan bernombor dalam bahasa Semai. Kajian bahasa Semai yang terdahulu oleh Zailani et al. (2023) menjadi antara panduan kajian ini. Kajian ini bersifat deskriptif yang membincangkan secara jelas dapatan daripada data temu bual bersama penutur natif bahasa Semai di RPS Betau, Sungai Koyan, Pahang. Penutur bahasa Semai di RPS Betau mempunyai suatu keunikan bahasa yang sama dengan dialek Pahang yang mempunyai kelajuan berbeza mengikut deras sungai. Bagi penutur bahasa Semai pula, ketinggian kawasan penempatan masing-masing

mempengaruhi alunan sebutan leksikal bahasa Semai di Pahang; semakin tinggi kawasan penutur bahasa Semai, semakin beralun leksikal yang disebutkan (Kura, temu bual peribadi, Mac 8, 2023). Kaedah kajian menggunakan teknik temu bual bersama responden. Dua orang lelaki dipilih sebagai responden, yang berumur 60 tahun ke atas, sejajar dengan pendekatan NORMs, 'Non-mobile,' 'Old,' 'Rural' dan 'Male,' yang disyorkan oleh Chambers dan Trudgill (1980). Temu bual yang dijalankan merupakan temu bual soal dan jawab antara pengkaji dengan responden dengan topik-topik berkaitan aktiviti di rumah, suasana di pasar dan suasana majlis keramaian. Proses temu bual bermula dengan soalan yang memberikan jawapan ayat mudah sehinggalah ayat yang kompleks. Kajian ini akan mengehadakan temu bual tersebut dengan memberi fokus kepada jawapan yang mempunyai kata bilangan dalam ayat bagi tujuan analisis menggunakan PM. Penggunaan suasana aktiviti harian dipilih sebagai medium untuk membantu responden membina ayat lengkap yang mudah dan dapat melancarkan pembentukan struktur ayat bahasa Semai. Pembersihan data kemudiannya dilakukan bagi memastikan setiap ayat yang dikumpulkan hanya mempunyai ayat-ayat yang lengkap bersama subjek, objek, predikat dan KK.

Dapatan dari temu bual kemudiannya akan ditranskripikan bersama penutur natif bahasa Semai, iaitu Tok Batin, yang dapat berkomunikasi dalam bahasa Melayu dengan baik. Transkripsi dapatan dijalankan menggunakan peringkat glos

dan seterusnya dalam struktur bahasa Melayu. Pemilihan ayat yang diambil dalam penulisan ini memberikan tumpuan kepada pembentukan ayat yang mempunyai penanda bernombor dalam ayat. Kaedah penganalisisan kemudiannya dilakukan menggunakan teori atau pendekatan Kerangka Minimalis (Chomsky, 2015) ekoran daripada kesesuaian pendekatan ini dengan data kajian, di samping pengkajian ayat untuk memperlihatkan fitur dan fungsi setiap leksikal bahasa Semai (Jalabneh, 2022). Analisis juga dijalankan dalam dua peringkat, penerangan operasi sintaksis pembentukan ayat dengan melihat pergerakan leksikal berdasarkan rajah pohon dan penerangan data secara deskriptif dengan bantuan rajah pohon yang mempunyai FAgre sebagai payung utama rajah pohon. Huraian mengenai fungsi penandaan bernombor bahasa Semai juga dapat diterangkan dengan baik dengna penggunaan teori PM. Oleh yang demikian, pendekatan yang disenaraikan dalam penulisan ini merupakan pendekatan yang baik untuk menjelaskan fenomena bahasa penandaan bernombor bahasa Semai.

DAPATAN KAJIAN

Kajian ini menggunakan PM bagi menganalisis dapatan data yang diambil bagi membincangkan penandaan bernombor dalam bahasa Semai dari aspek sintaksis. Maka, berdasarkan data yang dibersihkan, tiga jenis penandaan bernombor akan dipilih (tunggal, dual, jamak) untuk dianalisis dengan menggunakan pendekatan PM. Berpandukan kepada tiga jenis penandaan

Jadual 1

Padanan penandaan bernombor bahasa Semai yang gramatis dan janggal

Penanda bernombor bahasa Semai	an	bi	ubai	mai
KGND pertama tunggal	/	x	x	x
KGND pertama jamak	x	x	/	/
KGND kedua tunggal	x	/	x	x
KGND kedua jamak	x	x	/	x
KGND ketiga tunggal	x	/	x	x
KGND ketiga jamak	x	x	/	x

bernombor tersebut, leksikal KGND bahasa Semai akan dipadankan bersama penandaan bernombor tersebut untuk mengenal pasti ciri ayat gramatis dan ayat janggal. Hasil padanan tersebut dapat dilihat berdasarkan Jadual 1.

Hasil kajian mendapati bahawa penandaan bernombor hanya digunakan berdasarkan bilangan subjek dalam ayat dan hanya KGND tertentu sahaja dipadankan bersama penandaan bernombor bahasa Semai. Hal ini kerana penandaan bernombor tunggal bahasa Semai hanya digunakan bagi subjek tunggal bagi semua jenis KGND, penandaan bernombor dual hanya bagi bilangan dua sahaja, dan penandaan bernombor jamak hanya digunakan bagi KGND pertama tunggal.

Penandaan Bernombor dalam Bahasa Semai

Peranan penandaan bernombor dalam ayat berfungsi sebagai penanda yang memberikan maklumat dalam ayat mengenai kuantiti yang wujud pada subjek atau objek dalam ayat (Ochi, 2023). Penandaan bernombor tidak terhad kepada KN, namun juga didapati pada KK, pada sesetengah bahasa

seperti bahasa Inggeris dan bahasa Arab, untuk memberikan penjelasan mengenai jumlah subjek tanpa menghadirkan leksikal nombor dalam struktur ayat. Bagi bahasa Semai, penandaan bernombor ini juga menjelaskan bilangan penutur dalam ayat. Kesemua penandaan bernombor dilihat hanya hadir sebelum KK dan selepas subjek sahaja yang dianggap gramatis.

Penandaan Bernombor Tunggal

Subjek tunggal dalam ayat seperti bahasa Melayu, menggunakan penjodoh bilangan *seorang* ataupun *seekor* untuk memberikan maklumat mengenai KN yang digunakan dalam ayat ialah subjek tunggal. Penggunaan penjodoh bilangan *seorang* ataupun *seekor* juga menggambarkan pihak ketiga. Bagi bahasa Semai, penanda bernombor *bi* digunakan bagi kesemua KGND tunggal mewakili sebagai bilangan tunggal kepada subjek dalam ayat, seperti ayat berikut:

12. ile *bi* nok bukuk it
 Dia Tung. ambil buku itu

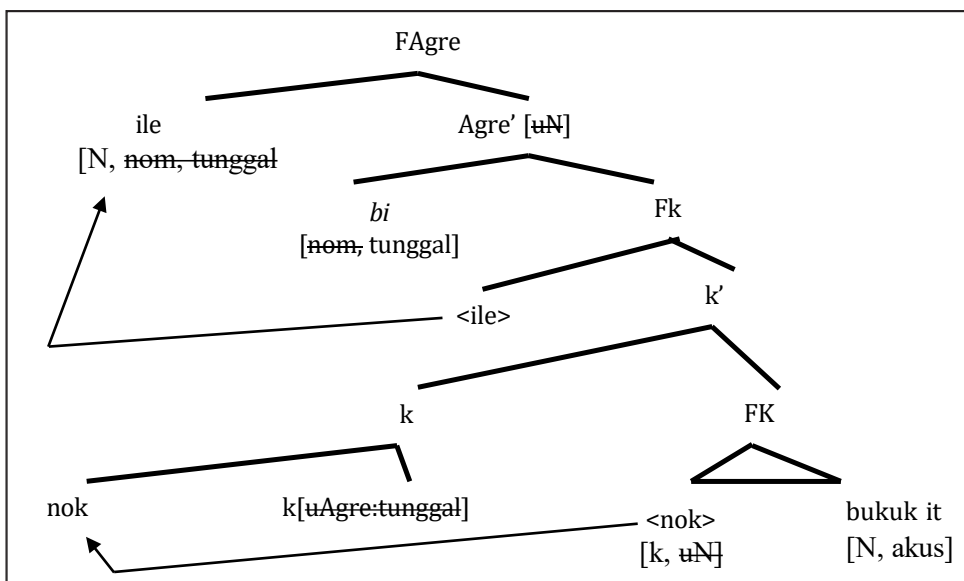
“Dia ambil buku itu.”

13. *hek bi menman ku dək*
 kamu Tung main di rumah
 “Kamu main di rumah.”
14. *kerdor it bi baklik roti*
 Perempuan itu Tung. beli roti.
 “Perempuan itu membeli roti.”
15. **bi ile nok bukuk it*
 Tung. dia ambil buku itu
 “Dia ambil buku itu.”
16. *bi hek menman ku dək*
 Tung. kamu main di rumah
 “Kamu main di rumah.”
17. **ile nok bi bukuk it*
 dia ambil Tung. buku itu
 “Dia ambil buku itu.”
18. **kerdor it baklik bi roti*
 Perempuan itu beli Tung. roti.
 “Perempuan itu membeli roti.”

Ayat 12 hingga ayat 18 merupakan ayat dalam bahasa Semai yang menggunakan penandaan bernombor *bi* sebagai leksikal yang membawa maksud tunggal kepada subjek dalam ayat. Penggunaan *bi* dilihat hadir selepas KGND ketiga *ile* seperti ayat 12 dan kedua *hek* bagi ayat 13, atau KN seperti ayat 14 *kerdor it*. Kehadiran *bi* selepas KGND atau KN dan sebelum KK memberikan maklumat kepada pendengar mengenai subjek tunggal dalam ayat-ayat tersebut. Penanda bernombor *bi* tidak boleh hadir sebelum KN, KGND atau

selepas KK seperti ayat 15, 16, 17 dan 18 kerana ayat tersebut akan menjadi janggal. Isu ini menunjukkan bahawa penggunaan penandaan bernombor perlu hadir selepas subjek dan sebelum KK untuk memberikan maklumat mengenai subjek. Sekiranya penanda bernombor hadir sebelum subjek, maka penanda tersebut tidak dapat menerangkan kuantiti subjek yang hadir selepas penanda tersebut. Begitu juga sekiranya penanda hadir selepas KK, maka penanda tersebut tidak dapat menerangkan subjek yang hadir sebelumnya. Oleh itu, posisi penandaan bernombor perlu hadir antara subjek dengan KK untuk menerangkan kuantiti subjek secara menyeluruh dalam ayat. Berdasarkan ayat-ayat berikut, jelas membuktikan bahawa penanda bernombor *bi* wajib untuk hadir selepas KN atau KGND dan sebelum KK bagi memastikan ayat tersebut gramatis dan difahami maksudnya. Rajah 3 merupakan rajah pohon pergerakan penanda *bi* dalam bahasa Semai.

Berdasarkan rajah pohon bagi ayat 12, penanda *bi* berada pada di bawah *Agre'*, bagi memastikan posisinya tidak mendahului subjek *ile*. Proses pembinaan rajah pohon yang dimulai dengan FK, KK *nok* digabungkan dengan padanan objek KN yang sesuai, *bukuk it*. Padanan logikal tersebut dianggap sempurna kerana padanan *bukuk it* sebagai objek memenuhi kriteria bagi digabungkan bersama *nok* yang merupakan kata kerja transitif yang memerlukan argument. Gabungan FK dan k kecil pula membentuk k' (k tanda). (k) kecil akan membentuk struktur cantuman yang diduduki oleh fitur tak berinterpretasi



Rajah 3. Rajah pohon ayat 12

[uN] di sebelah kanan. Posisi sebelah kiri pula diduduki oleh KK yang naik ke posisi k untuk memenuhi Uniformity of P-Assignment Hypothesis (UTAH), yang menyebabkan KK pada output FK meninggalkan bekas (<nok>). UTAH merupakan hubungan tematik antara predikat dengan argumen yang diwakili oleh hubungan struktur sintaksis ketika item digabungkan. Proses seterusnya pula menghubungkan padanan KGN *ile* bersama payung k' bagi memenuhi fitur nominatif yang berfungsi sebagai subjek dalam ayat. Proses selanjutnya pula menggabungkan Agre bersama output sebelumnya dengan kehadiran *bi* yang membawa fitur agrement tunggal bersamanya. Tujuan *bi* berada di bawah payung Agre' kerana leksikal *bi* tersebut membawa fitur yang perlu untuk melekat bersama subjek dalam ayat agar dapat berfungsi sebagai penanda bilangan

tunggal. Posisi *bi* juga berada sebelum kehadiran KK *nok* agar sinergi antara kuantiti dengan subjek dapat membawa maksudnya hingga ke hubungan KK dalam rajah pohon. KGN *ile* disemak berdasarkan prinsip Keserasian antara Agre dengan k, di mana fitur nominatif dan tunggal kedua-duanya telah disemak berdasarkan padanannya. Leksikal *bi* masih mengekalkan fitur tunggal bersamanya untuk memberikan maklumat mengenai argumen subjek yang dimilikinya haruslah bersifat tunggal. Oleh itu, leksikal *bi* dapat berada selepas subjek untuk berfungsi agar ayat dibina tidak janggal dan mempunyai makna yang difahami oleh pendengar.

Penggunaan penanda tunggal *bi* yang hanya dapat digunakan oleh KGND kedua dan ketiga memberikan persoalan baharu dalam kajian ekoran daripada penggunaannya yang mengecualikan

KGND pertama. Penanda tunggal *bi* yang hanya terhad kepada KGND kedua dan ketiga meninggalkan KGND pertama yang juga mempunyai subjek tunggal. Oleh itu, penggunaan penandaan bernombor berbeza digunakan khusus untuk KGND pertama, *an*. Penanda bernombor *an* seperti penanda *bi*, perlu dihadiri selepas KN ataupun KGND dan sebelum KK untuk memastikan kuantiti subjek dapat diterangkan menerusi penanda *an*. Hal ini kerana penanda *an* merupakan penanda yang khusus untuk KGND pertama dan sering digunakan bersama *ing* yang bermaksud *saya* atau *aku* dalam bahasa Semai. Ayat berikut menerangkan posisi penanda *an* dalam ayat bahasa Semai:

19. *ing an chip ma kedai*
aku Tung. jalan ke kedai.

“Aku sedang berjalan ke kedai.”

20. *ing an chep chip*
saya Tung. jalan jalan

“Saya sedang berjalan-jalan.”

21. *ing an nyot teyo ku botol ley*
saya Tung. minum air di botol ku

“Saya minum air dalam botol saya.”

22. **an ing chep chip*
Tung. saya jalan jalan

“Saya sedang berjalan-jalan.”

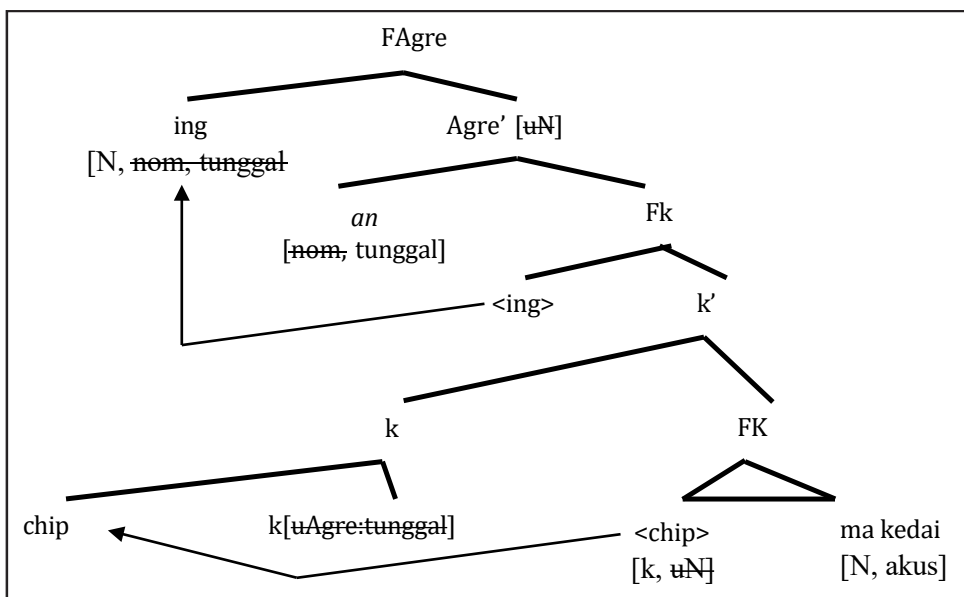
23. **ing chip an ma kedai*
aku jalan Tung. ke kedai.

“Aku sedang berjalan ke kedai.”

“Saya sedang berjalan-jalan.”

Seperti penanda *bi*, posisi *an* perlu berada selepas KGND pertama dan sebelum KK seperti ayat 19, 20 dan 21. Hal ini kerana penerangan atau fitur tunggal yang dibawa oleh penanda *an* perlu dipautkan bersama subjek ayat *ing* untuk menjelaskan bahawa pelaku tersebut merupakan pelaku tunggal yang merujuk kepada pihak pertama. Oleh itu, posisi penanda *an* haruslah berada tetap di antara KGND dengan KK agar maklumat mengenai subjek dapat diterangkan serta tidak menjadi janggal seperti ayat 22 dan 23. Rajah 4 menerangkan pergerakan penanda *an* dalam pembinaan ayat.

Pada rajah pohon ayat 19, penanda *an* berada di bawah payung *Agre'* agar penanda bernombor tersebut tidak mendahului subjek *ing* atau keseluruhan ayat akan menjadi janggal dan mengelirukan pendengar. KK *chip* yang hadir selepas penanda *an* kemudiannya dapat menjelaskan bahawa subjek dalam ayat merupakan pelaku tunggal yang melakukan KK *chip ma kedai* bermaksud *pergi ke kedai*. Secara tidak langsung, ayat ini merupakan ayat yang diberikan kala kini secara *default*. Kesemua fitur tidak berinterpretasi disemak melalui prinsip Keserasian, dan leksikal *an* mengekalkan fitur tunggal untuk memberikan maklumat mengenai agremen subjek bersamanya haruslah bersifat tunggal dan KGND pertama. Oleh itu, penanda *an* merupakan penanda bernombor tunggal yang khusus digunakan bagi KGND pertama sahaja, seperti penanda *bi* yang khusus diberikan kepada pelaku tunggal bagi KGND kedua ataupun ketiga sahaja. Sekiranya penanda *an* dan *bi* digunakan bagi KGND yang berbeza, maka ayat yang dibina



Rajah 4. Rajah pohon ayat (19)

akan menjadi janggal ekoran daripada penandaan bernombor yang tidak sesuai digunakan untuk KGND masing-masing seperti ayat berikut:

24. ing bi nok buku it
 saya Tung. ambil buku itu

“Saya ambil buku itu”

25. *ile an chep chip.
 dia Tung. jalan jalan

“Dia sedang berjalan-jalan.”

26. *hek an chep chip.
 kamu Tung. jalan jalan

“Kamu sedang berjalan-jalan.”

Walaupun penanda *an* dan *bi* keduanya membawa fitur tunggal bersamanya, namun sekiranya digunakan dengan KGND yang tidak bersesuaian, maka ayat tersebut

menjadi janggal ekoran daripada kesalahan penggunaan KGND dalam ayat seperti ayat 24, 25 dan 26. Meskipun ayat tersebut secara zahirnya memenuhi posisi-posisi yang betul, namun kesalahan penanda bernombor menjadikan ayat-ayat berikut salah dan janggal bagi penutur bahasa Semai di Pahang. Pembentukan rajah pohon tidak dapat dijalankan ke atas ayat tidak gramatis kerana PM hanya menjalankan ayat yang mempunyai makna dan boleh difahami oleh pendengar. Ayat yang tidak gramatis, sekiranya dibentuk rajah pohon, akan mengakibatkan berlakunya pertimbangan pada peringkat *Agre'* kerana rajah pohon mengambil kira padanan yang bersesuaian dengan setiap leksikal dalam ayat. Berdasarkan ayat 24 hingga 26, padanan penandaan bernombor tidak bersesuaian dengan subjek, maka ayat dianggap tidak gramatis dan tidak dapat

diterangkan melalui paparan rajah pohon ke peringkat minimal. Oleh itu, penggunaan penanda bernombor haruslah tepat dan bersesuaian dengan KGND masing-masing untuk membentuk ayat yang gramatis dalam bahasa Semai.

Penandaan Bernombor Dual

Bahasa Semai turut mempunyai penandaan bernombor yang mewakili kuantiti dua bagi subjek yang digunakan dalam ayat, sama seperti bahasa Arab. Fenomena ini membuktikan bahasa Orang Asli turut progresif dalam penandaan bernombor ekoran mempunyai pengkhususan penandaan bernombor yang menggunakan penanda atau leksikal tersendiri dan bukan leksikal nombor. Seperti penanda tunggal, penanda dua bahasa Semai *ubai* perlu digunakan selepas subjek dan sebelum KK agar fitur yang dibawa bersamanya dapat menerangkan kuantiti yang wujud pada subjek dan dibawa kepada keseluruhan ayat, seperti contoh ayat berikut:

27. duwak sayek kəral *ubai*
 dua budak lelaki Dual

menman besame same
 main bersama-sama

“Dua orang budak lelaki bermain bersama-sama.”

28. *duwak *ubai* sayek kəral
 dua Dual. budak lelaki

menman besame same
 main bersama-sama

“Dua orang budak lelaki bermain bersama-sama.”

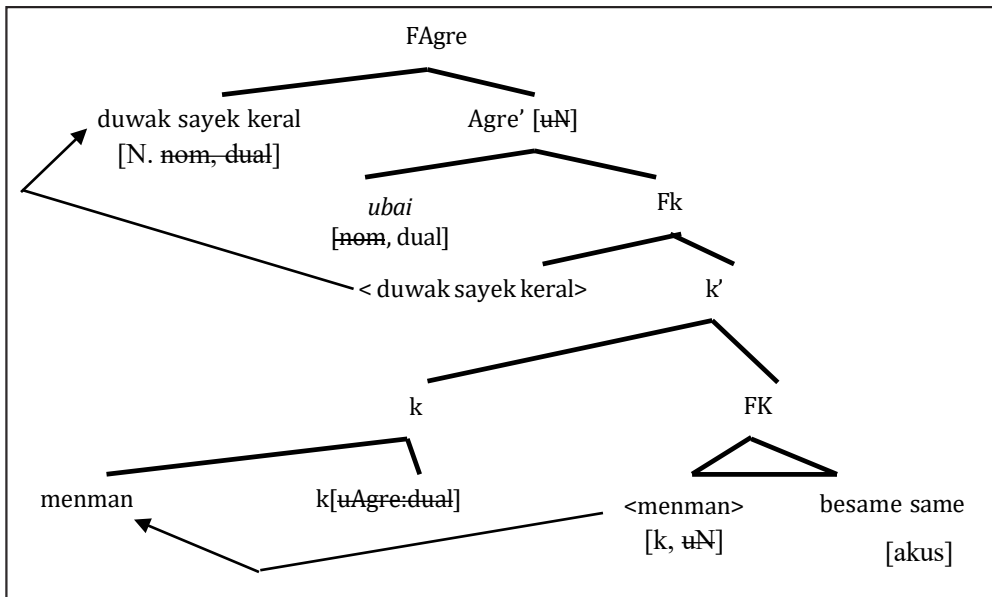
29. *duwak sayek kəral menman
 dua budak lelaki. main

ubai besame same
 Dual bersama-sama

“Dua orang budak lelaki bermain bersama-sama.”

Ayat 27 menunjukkan bahawa wujud elemen penanda bernombor selain leksikal nombor dalam ayat untuk menerangkan kuantiti subjek dalam ayat. Subjek ayat *duwak sayek kəral* secara dasarnya telah menerangkan jumlah pelaku dalam ayat ekoran daripada leksikal nombor *duwak* pada awal ayat, namun, dalam bahasa Semai, penanda bernombor turut perlu hadir dalam ayat untuk memastikan ayat tersebut gramatis dan lengkap. Maka, kehadiran penanda bernombor dua *ubai* hadir selepas subjek, bagi memberikan fitur *dual* kepada subjek seterusnya menerangkan kuantiti subjek dalam ayat secara keseluruhan. Mengikut peraturan penandaan bernombor bahasa Semai, seperti penanda *bi* dan *an*, penanda *ubai* juga tidak dapat hadir sebelum subjek seperti ayat 28 dan selepas KK seperti ayat 29 atau kedua-dua ayat akan menjadi janggal dan tidak dapat difahami oleh pendengar. Rajah 5 menerangkan pergerakan penanda *ubai* dalam ayat (27).

Rajah pohon ayat 27 menunjukkan posisi penanda bernombor *ubai* dilihat berada di bawah payung *Agre'* agar posisinya tidak mendahului subjek ayat *duwak sayek kəral*. Semakan fitur tidak berinterpretasi dilakukan berdasarkan prinsip Keserasian yang menyemak kesemua fitur dalam setiap pemilihan leksikal dalam ayat. Leksikal



Rajah 5. Rajah pohon ayat (27)

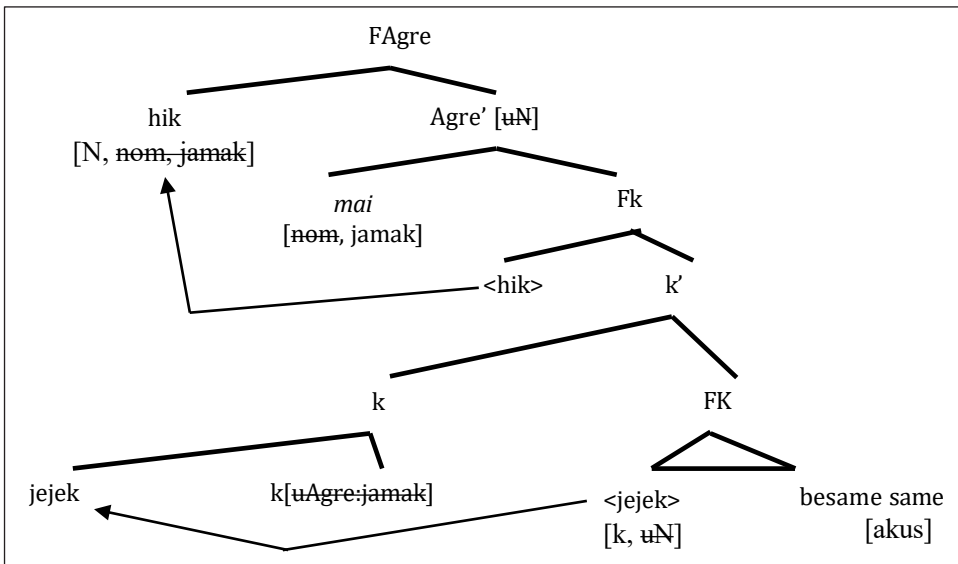
ubai mengekalkan fitur *dual* bersamanya untuk memberikan maklumat bahawa padanan subjek hanyalah khusus kepada subjek yang bersifat *dual*. Oleh sebab tiada pengkhususan kala yang dibawa oleh mana-mana leksikal, maka secara *default* kala kini diberikan bagi ayat ini. Keseluruhannya, penggunaan penanda *ubai* merupakan penanda khusus *dual* yang wujud dalam bahasa Semai bagi menerangkan kuantiti subjek dua orang.

Penandaan Bernombor Jamak

Penanda bernombor jamak bagi bahasa Semai menggunakan penanda *mai* dalam ayat untuk menunjukkan kuantiti subjek dalam ayat adalah jamak. Penggunaan penanda *mai* digunakan bersama KGND pertama jamak *jik* bagi *kami* ataupun *hik* bagi *kita*. Paparan data bagi penggunaan penanda *mai* adalah seperti berikut:

30. *jik mai* beruyong
kami Jama. gotong-royong
“Kami bergotong-royong.”
31. *hik mai* jejek besame-same
Kita Jama. duduk bersama-sama
“Kita duduk bersama-sama.”
32. **mai jik* beruyong
Jama. kami gotong-royong
“Kami bergotong-royong.”
33. **hik jejek mai* besame-same
Kita duduk Jama. bersama-sama
“Kita duduk bersama-sama.”

Bagi KGND pertama jamak, *hik* dan *jik* sudah membawa fitur jamak bersamanya, namun sekiranya tidak dihadirkan penanda jamak *mai* selepasnya, maka ayat yang dibina akan menjadi janggal seperti ayat 32



Rajah 6. Rajah pohon ayat 31

dan 33. Maka, ayat yang tepat penggunaan penanda *mai* adalah seperti ayat 30 dan 31 yang meletakkan penanda jamak selepas subjek bagi memberikan fitur jamak kepada pelaku dalam ayat untuk diterangkan secara keseluruhan bagi ayat yang dibina. Rajah 6 menerangkan pergerakan penanda *mai*.

Pada rajah pohon ayat 31, posisi penanda *mai* berada di bawah Agre' untuk memastikan posisinya tidak mendahului subjek ayat *hik*. Kemudiannya, KK *jejek bersame-same* dijadikan predikat ayat untuk memberikan maklumat mengenai subjek jamak dalam ayat, agar maklumat ayat menjadi lengkap dan gramatis. Setiap fitur tidak berinterpretasi disemak melalui prinsip Keserasian bagi memastikan fitur-fitur tersebut mempunyai padanannya dan dapat disemak berdasarkan prinsip tersebut.

Secara umumnya, penggunaan penanda jamak *mai* digunakan oleh KGND pertama jamak *hik* dan *jik* untuk memastikan fitur

jamak yang dibawa oleh penanda bernombor dapat diberikan kepada subjek sebagai pelengkap ayat agar ayat menjadi gramatis dan sempurna.

PERBINCANGAN

Penandaan bernombor dalam bahasa Semai mempunyai padanan yang tersendiri dan tidak dapat digunakan oleh KGND yang tidak bersesuaian. Hal ini kerana penandaan bernombor tersebut perlu dipadankan dengan KGND yang sesuai berdasarkan Keserasian pada fitur dan bentuknya dalam struktur ayat. Penerangan rajah pohon yang dibincangkan mengambil kira pergerakan leksikal dan proses-proses penyemakan fitur dilakukan mengikut prinsip Keserasian yang diambil panduannya berdasarkan analisis sintaksis KGND Mah Meri oleh Sultan dan Mohamad Yusof (2023).

Walau bagaimanapun, penggunaan penandaan bernombor kian kurang

digunakan oleh penutur bahasa Semai di kawasan RPS Betau ekoran daripada penutur bahasa Semai yang asli semakin berkurangan dan penggunaan leksikal bahasa Melayu yang dipinjam juga semakin banyak digunakan menggantikan fitur asal bahasa Semai (Tok Batin Osman, temu bual peribadi, Ogos 13 2022). Oleh yang demikian, hanya penanda-penanda yang disenaraikan sahaja yang dapat dianalisis dalam kajian ini bagi penanda tunggal dan jamak, ekoran daripada keterbatasan responden NORMs yang sukar untuk didapati di kawasan tersebut.

Tambahan pula, bagi penanda jamak *mai*, majoriti penutur bahasa Semai di RPS Betau turut menggunakan leksikal tersebut sebagai KGND ketiga *mereka* pada ayat yang dibina. Isu ini menimbulkan persoalan kepada pengkaji sekiranya leksikal *mai* turut membawa KGND bersamanya ataupun tidak. Sehubungan itu, penggunaan penanda *mai* sebagai penanda jamak yang diiktiraf oleh responden hanyalah diberikan kepada KGND pertama jamak *hik* dan *jik*. Namun begitu, fenomena satu leksikal mempunyai pelbagai fitur bukanlah perkara asing dalam bahasa Orang Asli kerana komunikasi yang dituturkan oleh komuniti Orang Asli yang gemar menggunakan ayat pendek dan leksikal berulang dalam ayat yang sama (Ropiah et al., 2023). Maka, kajian lanjutan mengenai leksikal *mai* perlulah dijalankan untuk khalayak memahami dengan lebih terperinci mengenai leksikal tersebut dan fitur yang dibawa bersamanya.

KESIMPULAN

Penandaan bernombor yang digunakan dalam ayat adalah berbeza mengikut bahasa-bahasa yang wujud di dunia, termasuklah bahasa Orang Asli. Pengaruh bahasa Inggeris ke dalam bahasa Semai, seperti yang diulas oleh Kura (temu bual, Mac 8, 2023) dapat dilihat pada beberapa penanda bernombor yang dibincangkan membuktikan bahawa bahasa Semai merupakan antara bahasa yang unik dan perlu dipelihara sebagai bahasa warisan, seperti bahasa-bahasa Orang Asli yang wujud di Malaysia. Penggunaan PM yang dapat menerangkan struktur ayat beserta penandaan bernombor memberikan gambaran bahawa ayat-ayat yang lengkap perlu dimasukkan penanda-penanda yang bersesuaian agar ayat menjadi gramatis dan difahami. Penerangan sehingga ke peringkat minimal menggunakan rajah pohon juga membantu kajian ini untuk melihatkan pergerakan penanda bernombor dalam ayat dan diterangkan dengan jelas dan terperinci.

Walaupun fenomena penandaan bernombor dapat dihuraikan menerusi dapatan data yang diperoleh, kekangan-kekangan seperti kekurangan data, kekurangan responden yang sesuai dan keterbatasan waktu menjadi faktor kepada perbincangan data yang tidak menyeluruh dalam kajian ini. Maka, berpandukan kajian ini, kajian mengenai bahasa Orang Asli dan fenomena bahasa bersamanya perlulah digiatkan dan diperbanyakkan agar kekurangan kajian ini dapat ditambah baik dan diperincikan lagi penerangannya supaya pemahaman masyarakat terhadap

bahasa Semai atau bahasa Orang Asli keseluruhannya dapat dipertingkatkan dan diamati dengan baik dan menyeluruh. Penggunaan kaedah kajian yang lebih baik juga dapat memastikan data-data yang diambil lebih berkualiti dan bernas agar perbincangan kajian lebih jelas dan terperinci.

Implikasi Kajian

Kajian ini memberikan maklumat mengenai sistem penomboran yang melambangkan jumlah subjek dalam bahasa Semai untuk membuktikan bahawa bahasa Semai turut mempunyai sistem bahasa tersendiri, di samping mempunyai keunikan dalam struktur sintaksis. Kajian ini juga memberikan pemahaman baharu bahawa terdapat pengaruh bahasa Inggeris dalam bahasa Semai yang mempunyai sistem penomboran bagi melambangkan subjek, seperti yang dimaklumkan oleh penutur bahasa Semai (Kura, temu bual peribadi, Mac 8 2023). Penggunaan PM turut dimaklumkan untuk menganalisis dan menghuraikan penandaan bernombor bahasa Semai dengan membincangkan kedudukan, fungsi dan syarat yang perlu dipatuhi dalam meletakkan penanda tersebut dalam struktur sintaksis bahasa Semai. Oleh itu, PM dapat dijadikan pendekatan yang baik untuk menganalisis leksikal yang tidak ditandai dengan jelas hingga ke peringkat minimal. Pemeliharaan bahasa ini juga dapat dilaksanakan dengan mempromosikan keunikan bahasa Semai kepada masyarakat umum yang boleh diserap dalam bahasa Melayu sebagai varian bahasa. Kajian

bahasa Semai ini juga membuktikan bahawa pengaplikasian teori PM dapat digunakan ke atas bahasa-bahasa asing seperti bahasa Orang Asli dengan baik. Oleh yang demikian, PM membuktikan bahawa pendekatannya adalah antara pendekatan yang baik untuk menjelaskan struktur ayat suatu bahasa dengan teliti dengan menerangkan bentuk ayat bahasa tersebut hingga ke peringkat minimal.

Batasan Kajian

Dapatan kajian ini hanya menumpukan kepada penutur bahasa Semai yang berada di Pahang, kawasan sekitar Cameron Highlands sahaja dan tidak meliputi penutur bahasa Semai di kawasan negeri Perak. Hal ini kerana kajian terhadap penutur bahasa Semai di Perak sudah pernah dijalankan (Pelet et al., 2023). Oleh itu, kajian ini membataskan data kepada penutur bahasa Semai di kawasan sekitar Cameron Highlands, Pahang sahaja.

Cadangan Kajian pada Masa akan Datang

Kajian hadapan perlu meperluaskan dapatan kajian dengan mengambil kira struktur sintaksis penandaan bernombor daripada penutur bahasa Semai di Perak untuk melihat persamaan ataupun varian baharu yang wujud ekoran daripada perbezaan kawasan. Tambahan pula, kajian hadapan mengenai bahasa Semai dapat dilihat daripada teras yang lain untuk memperincikan leksikal bahasa Semai dengan jelas dan teliti. Penggunaan teori yang lain juga digalakkan untuk menghasilkan perbincangan yang

menyeluruh dari pelbagai pendekatan yang berbeza.

PENGHARGAAN

Kajian ini dibiayai oleh Skim Geran Penyelidikan Fundamental (FRGS) pindaan 1 2021 yang berkod WAB/10/UKM/02/2 dan Geran Universiti Penyelidikan (GUP) 2021 yang berkod 063; bertujuan membina pangkalan data model SLap (*Scientific Language Preservation*) untuk bahasa Orang Asli Negrito dan Senoi, dan dijalankan mengikut garis panduan Sekretariat Etika Penyelidikan UKM (Kod Protokol: UKM PPI/111/8/JEP – 2022 426).

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Playwrights Fightback: Dramatizing Anti-Trafficking Narratives in John Godber's *Sold* Using Foucault's Transgression

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ABSTRACT

Human trafficking is still an ongoing, vicious crime committed against humans worldwide. Many studies investigated the different narratives employed in the process of human trafficking. However, the investigation of the anti-trafficking narrative in John Godber's *Sold* has yet to be conducted. Thus, this article examines the narrative of trafficking women in *Sold* in light of Gayle Rubin's concept of "The Traffic in Women: Notes on the Political Economy of Sex," which explains why this heinous crime targets women. Then, it examines the anti-trafficking narrative introduced by the playwright in his *Sold*, in light of Foucault's concept of *Transgression*. The article conducts a textual analysis, enhanced by the assumptions of the two frameworks, to investigate the trafficking narratives and their anti-trafficking narratives in the selected text. It comes up with two narratives used to traffic women in the text: the first is the trafficking for sexual purposes, and the second is the forced labor, both of which acted on the trafficked victim, Anja. Consequently, it concludes that the anti-trafficking narrative is released with the help of transgression through the character of Ray, who defies the common narratives of trafficking when he risks the unity of his family to save a victim of trafficking. The playwright effectively conveys an anti-trafficking narrative that seeks to

shift readers' perspectives on their responsibility in rescuing trafficking victims and eradicating this inhumane crime.

ARTICLE INFO

Article history:

Received: 14 November 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.06>

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Keywords: Anti-trafficking narratives, Foucault, Gayle Rubin, sex and forced labor, *Sold*, trafficking narratives

INTRODUCTION

Human trafficking is an ongoing critical issue all around the globe that still impacts some people's lives (Piotrowicz et al.,

2017). Kevin Bales, a British sociologist and an anti-slavery activist, defines human trafficking in his book *Disposable People: New Slavery in the Global Economy* as "the total control of one person by another for the purpose of economic exploitation" (1999, p. 38). He associates the issue of human trafficking with slavery, as the title of his book clearly denotes. Following this definition, it is clear that there are certain narratives that facilitate the targeting of human trafficking victims. Human trafficking is a problem that affects millions of people each year, including children and adults. It involves the exploitation of people for profit with the use of force, fraud, or coercion to control people and force them to work against their will. Many people consider it a continuation of slavery in the modern world. While in slavery, victims are owned by another person and are treated as property, and they are often subjected to physical and emotional abuse, they are also forced to work without pay or for very low wages (Aronowitz, 2011). In human trafficking, however, victims are often transported to a new location, where they are isolated and unable to escape their traffickers. These victims are forced to work in dangerous or exploitative conditions, such as in prostitution, forced labor, or domestic servitude.

John Godber (1956–) is a British playwright who is known for his social critique of social ills, among which is human trafficking. His play *Sold* (2007) talks about this heinous crime against humanity. The story of the play revolves around Anja,

a Moldovan girl, who falls victim to a trafficking network that takes girls from Eastern European countries and sells them for brothels in the rest of Europe. She was lured into having a better chance of living in the United Kingdom by her cousin Elena, who is a policewoman and a trafficker, but in fact, Anja was taken there to be exploited. She was deceived by the narrative that she would achieve her dreams in the promised land of the United Kingdom (Aronowitz, 2011), but unfortunately, she was trapped by the trafficking network, which demanded high transportation fees after taking her to the destination country. Traffickers exploited her shortage of money, and she could not pay them back the fees only through working in prostitution.

Accidentally, in London, there is a journalist, Ray, who is working on a story about human trafficking and the new slave trade. He meets Anja in a brothel and convinces her to tell her story, which reveals the horrible consequences that she has gone through, leading Ray to put a mortgage on his house to save her from prostitution. Ray's help has dissatisfied his wife, Caz, who is displeased with such an act. Moreover, he also assigns Anja the job of a maid at his house leading to more troubles between Ray and Caz. Anja sleeps in a bar attic that belongs to the married couple Les and Pat. One time, she is noticed by Kate, the maid who works for the brothel where Anja used to work, and she informs Les and Pat, which leads them to exploit her sexually several times, eventually leading to her demise. Anja's story shows the harsh

reality of victims of human trafficking, and it works as a reminder to the world to take action.

Women in general suffered from marginalization and oppression historically and stand as easy prey for their counterparts, i.e., men. From an economic perspective, Karl Marx, for instance, sees women as a domestic object that is a necessary instrument for men in society:

The bourgeois sees his wife a mere instrument of production. He hears that the instruments of production are to be exploited in common, and, naturally, can come to no other conclusion that the lot of being common to all will likewise fall to the women. He has not even a suspicion that the real point aimed at is to do away with the status of women as mere instruments of production. (Marx & Engels, 2004, p. 25)

For Marxists, woman falls into the category of serving men even if she is from the bourgeois class. This kind of narrative legitimizes the economic oppression of women, which in Anja's case is one of the main factors that led her to leave her country seeking a better economic status elsewhere. This narrative is also a legitimization, from an economic point of view, for the traffickers to gain as much profit as they can from the victim since their aim is profit. Women can bring them the profit they seek through exploiting their bodies, which is one of the most notable reasons behind targeting women in the trafficking crime.

Also, feminist thinkers argue that patriarchy defines women according to their sex category. Patriarchists view women as objects meant to satisfy their desires, as well

as bear and raise their children. Simone De Beauvoir in her influential book *The Second Sex* states:

With the advent of patriarchy, the male resolutely claimed his posterity; the mother had to be granted a role in procreation even though she merely carried and fattened the living seed: the father alone was the creator. Aristotle imagined that the fetus was produced by the meeting of the sperm and the menses: in this symbiosis, woman just provided passive material, while the male principle is strength, activity, movement, and life. (De Beauvoir, 1949, p. 45)

This kind of narrative further enhances the idea that a woman is defined according to the binary opposition, meaning that she is considered secondary when she is compared to a man. This is true in Anja's case as she is seeking a job (a dancer) that fits her biological attributes in the destination country. This entails the internalization of the female characters to the narrative that they are weaker, and when they want to work, they seek a job that fits their biological determinacy.

The biological difference between women from that of a man is also one of the main factors that contribute to the issue of trafficking. Sigmund Freud (1931), in his work *Female Sexuality*, addresses this difference:

Quite different are the effects of the castration complex in the female. She acknowledges the fact of her castration,

and with it, too, the superiority of the male and her own inferiority; but she rebels against this unwelcome state of affairs. (p. 229)

On one hand, a woman is biologically weaker than a man and she lacks what the male possesses, a phallus, which is considered a merit for men and a demerit for women in the Freudian sense. On the other hand, women have what men want, which is a beautiful creature with whom they can fulfill their desires. This is the reason behind making women a very profitable commodity for the traffickers.

All of these narratives contribute to the fact that women are targeted by the traffickers and it is legitimized for them from economic, political and social points of views. In her book *Sex at the Margins*, Laura María Agustín comments on how discourse is enhancing the victimization process for the traffickers: "The journeys of women who work in the sex industry are treated as involuntary in a victimising discourse known as 'trafficking'" (Agustín, 2008, p. 8).

Thus, this article examines two types of trafficking in Godber's *Sold*: human trafficking for sexual exploitation and forced labor. Anja, the victim, is a victim of these two narratives, who is forced to work to pay back her debt, and she is sexually abused in the play. Meanwhile, the anti-trafficking narrative is explored in light of Foucault's transgression, which is represented through Ray's actions and responses to the trafficking narratives.

LITERATURE REVIEW

Sex trafficking and forced labor are among the most well-known forms of human trafficking. These forms have been widely explored by writers in literature, which in turn has prompted scholars to investigate them further. For instance, in her article, Donna Bickford (2012) sheds light on sex trafficking narratives and their relationship with social perception and the efforts for social change. It integrates literary criticism with cultural analysis to examine a variety of text genres, such as reports from mainstream media and two types of sex trafficking novels. Throughout her analysis, she examines novels that depict victims of sex trafficking, like Patricia McCormick's novel *Sold* and James Levine's *The Blue Notebook*. Each narrative includes elements of familial collision, fraud, and deception as part of the actual trafficking process. She argues that when people write about their experiences, literacy acts as a place of survival and a coping strategy, allowing their ideas and feelings to take prominence and be acknowledged. She concludes that the capability of narrative to inspire actions aimed at ending sex trafficking is quite apparent in the selected texts. Bickford's article differs from the current study in terms of the data and the framework used, as it doesn't apply a theory to study the narratives and anti-narratives of human trafficking.

Living in poor societies is one of the main causes of trafficking, as seen in Nnyagu et al. "Depravity in Ifeanyi Ajaegbo's *Sarah House*" (2023). There are a lot of people who indulge in illegal activities to survive the harsh conditions they face. Children are

trafficked for the purpose of prostitution and other illegal activities. They assert that corrupt politicians are involved in the spread of such activities as they have agents who operate in the trafficking networks, meaning that trafficking turns out to be a common institutionalized narrative in poor societies. This, they argue, has led creative writers to write about this issue to show society this kind of corruption. Their paper examines the novel *Sarah House* to show the realities of child trafficking and expose its effects on people (Nnyagu et al., 2023). Their article matches the point of interest of the current study but differs in terms of the selected data and methodology.

Forced labor is the new form of slavery that is still prominent during the 21st Century, being perpetrated by criminals all around the globe, even in the most advanced, prosperous nations. Victims of human trafficking are usually enslaved and forced to work against their will. Kevin Bales and Ron Soodalter, in their book *The Slave Next Door: Human Trafficking and Slavery in America Today* (2010), point out that, as a matter of fact, human trafficking and slavery are the third-largest criminal enterprise. It exists in the world of today, and it is flourishing. They argue that slavery is alive in the United States, thriving and being practiced all over the country. Their book gives a detailed account of the state of modern-day slavery in the United States.

The significance of the current study is different from the past studies conducted on human trafficking. It investigates the anti-narratives of human trafficking, which have not been studied before in the existing

literature written about human trafficking, especially in Godber's *Sold* using Foucault's *Transgression*. Likewise, Gayle Rubin's "The Traffic in Women: Notes on the Political Economy of Sex" is used to investigate the reasons behind the targeting of women as victims of human trafficking.

METHODOLOGY

This study employs a qualitative research methodology centered on textual analysis to explore the trafficking and anti-trafficking narratives within the play. Textual analysis is particularly suited to this investigation as it allows for an in-depth examination of the text's themes, motifs, and theatrical strategies, providing insight into how the play addresses and critiques human trafficking. Two key theoretical concepts guide this analysis: Gayle Rubin's "The Traffic in Women: Notes on the Political Economy of Sex" and Michel Foucault's concept of transgression.

Rubin's concept provides a critical lens through which to understand the systemic factors that make women particularly vulnerable to trafficking. According to Rubin, the political economy of sex is structured in a way that commodifies women and perpetuates gender inequalities. This concept is used to dissect the play's portrayal of female characters and to highlight the socio-economic and cultural forces that contribute to their exploitation by traffickers. By applying Rubin's framework, the analysis seeks to reveal the narratives of power dynamics and economic motivations that drive the trafficking of women, as depicted in the play through the portrayal

of Anja's character, who is duped by the traffickers.

Foucault's notion of transgression is employed to illuminate the play's anti-trafficking narrative. Transgression, in Foucault's terms, refers to actions or behaviors that violate established social norms and boundaries. This concept is instrumental in analyzing how the play challenges and critiques societal norms related to human trafficking by examining instances of transgression within the play, as in Ray's actions, which defy the institutionalization of human trafficking. Foucault's *A Preface to Transgression* aids in understanding how the play's narratives disrupt conventional representations of trafficking and advocate for social change (Foucault, 1977).

RESULTS AND DISCUSSION

Trafficking Narratives in *Sold*

This study argues that Human traffickers exploit certain narratives to dupe their victims into this non-human crime. Thus, playwrights represent these narratives in their dramatic works, besides dramatizing anti-narratives for them to save the victim via raising people's awareness of the dangers of these acts. Anti-narratives of human trafficking are not well explored because the studies on human trafficking focus merely on the narratives of trafficking.

One of the narratives employed by the Human traffickers to entrap their victims is the fake promise to the victim to have a better life elsewhere. These traffickers see the victims as vulnerable prey that can

be easily manipulated and exploited. The play *Sold* starts with Ray and Jack, two journalists from London, as they discuss the state of human trafficking. Jack says to Ray, "I've seen some footage on the internet, you can buy an Eastern European girl in a car park, what's that all about?" (Godber, 2007, p. 388). This clearly denotes the current state of sex trafficking in the world, and goes in line with what Gayle Rubin calls a Sex/Gender system "As a preliminary definition, a "sex/gender system" is the set of arrangements by which a society transforms biological sexuality into products of human activity, and in which these transformed sexual needs are satisfied" (Rubin, 1975, p. 159). Throughout this narrative, it is clear that the female body becomes a commodity that can be sold and bought.

Ray is supposed to get a lead for his article so that he will be commissioned, so he goes to a brothel to find a victim of human trafficking so that he can use her story. There, he meets Kate a native Londoner who works at the brothel as the person who responds to calls and arranges for the meetings between the customers and the prostitutes. Ray meets her and tries to find a source for his story, and she arranges for him a meeting with a prostitute called Anja, who is a Moldavian victim of sex trafficking. Kate tells him that "You'll like her, she don't speak much English but she does all the services" (Godber, 2007, p. 391). This line shows how Kate and society, in general, treat these victims as if they were objects with no feelings. She is talking about Anja's inability to speak much English as an

advantage that the customer would enjoy. Kate is brainwashed with the narrative that a woman's role is to serve only and be treated as an object. This is seen in Anja's case, who is exploited as a prostitute who can be bought and sold. Rubin explains this notion as "Women are transacted as slaves, serfs, and prostitutes, but also simply as women" (Rubin, 1975, p. 176). This is one of the narratives employed by the traffickers, which is the exploitation of the illiteracy of the trafficked persons. Traffickers utilize the common narrative that Westerners have the problem of superiority, believing in the supremacy of their race over other races, which legitimizes for them the exploitation of 'the other' as sex traffickees.

Anja, the victim of sex trafficking, starts to tell Ray about her trafficking story. She tells him about Elena, her cousin and one member of the trafficking network. Dramatically speaking, the playwright uses Elena in a flashback-like technique to recall Anja's story to Ray. Elena starts talking to Anja about a woman who had to pay the nurse to get her mother a bedpan in the hospital. She explains to her that this woman had to pay just to get a bedpan in the hospital emphasizing that things are bad in Moldova and there is no work here "... There is nothing! My friend has gone Italy, she is working. She is working a good job. Many girls are leaving" (Godber, 2007, p. 408). This kind of narrative is told by Elena to convince Anja that she is oppressed in this society and she has to leave, which goes in line with Rubin's idea that women are oppressed even in capitalist societies

"Women are oppressed in societies which can by no stretch of the imagination be described as capitalist" (Rubin, 1975, p. 163). This marks the actual narratives of trafficking in the play. Elena tries to convince Anja that things are bad in her country and a lot of girls are leaving for other places in Europe, where they are working and gaining a lot of money that they wouldn't dream of getting in Moldova. She tells her that "We must have dreams" (Godber, 2007, p. 408), dreams that are not achievable here but in other places where there are chances. Anja starts thinking of her dreams and tells her that she does have dreams that she dreams of dancing on TV in movies. This illusion of having a better life elsewhere is what motivates the victims of sex trafficking; they seek to achieve what they can't in their home country, and this was initially the dream of Anja.

Anja is convinced by the idea of travelling, yet the expenses are a critical concern for her. This makes Elena happy as she believes that she has reached her goal of getting another victim to be trafficked. She tells her, "Natasha tell me woman who can help." She adds, "You go, get job and then you pay, Natasha is making good money in Italy, she is paying back, is no problem" (Godber, 2007, pp. 408–409). This is the trap that traffickers use as a narrative of exploiting and cheating their victims. They take them to the destination country and demand them high transportation fees that they have to work in the sex industry to pay them back. Anja then thinks of her mother which makes Elena immediately respond

that Natasha is sending a lot of money to her mother "She is helping pay for operation. Natasha is sending money for her mama, so she can have operation. You could do that! If your mama need operation, Anja, you can pay, you can save money!" (Godber, 2007, p. 409). Sending money back home is another narrative sold to Anja by Elena to make her agree to go abroad, presumably to get money and achieve her dreams. She adds, "She is making good money, many girls are leaving for Italy, Spain, there are many girls who like in UK. ..." (Godber, 2007, p. 409). After she makes sure that Anja is brainwashed by her narratives, she tells her, "I will take you. In eight days, you have passport and I will take, you will meet lady who helped Natasha" (Godber, 2007, p. 409). This marks the trap that Elena has put on Anja; she instigates her and makes her think of her dreams of getting a better life and achieving her dreams, so that she can victimize her for financial gain. This is the way trafficking works: The traffickers seek vulnerable victims who need money or who are disgusted with their life in their country, and they tell them stories about people who left and made a better life elsewhere. At last, Elena tells Anja:

Elena You must think about it, she is making real money and is helping her mama and papa. You know what it is like here, you must pay for everything. A doctor here earns nothing, why you think you have big ideas, okay I tell you, forget it Anja! Forget it, you do not deserve to have the chance! Forget this! (Godber, 2007, p. 410)

By telling Anja that she doesn't deserve this chance, she provokes her into complying with her. It is important to note that there is a kind of truth in the narrative of traffickers. For instance, Elena mentions that doctors in her country earn nothing, compared to other privileged places. This truth is what makes the victims fall into the trap of the traffickers, since they know the harsh reality people are living, to the extent that even doctors are living a life of bread and cheese.

The trafficking narrative continues with Vlad, one of the traffickers, as he assures that these girls must be broken and treated like animals. Vlad states, "Sometime with strong girls they are hard to break. Sometime we need hundred men! With strong girl we need to have maybe hundred times. We have to teach lesson." He emphasizes the need to break these girls (Godber, 2007, p. 415, lines 16–18). He states that even if it takes raping a victim by hundred men to break a strong girl, we'll do it anyway. This kind of narrative of using rape as a weapon against women goes in line with the notion of Salih's et al. (2018) that "rape is depicted as a natural product of a biased society that considers women as weak and objects of rape" (p. 286). They don't even consider them as real human beings "It like breaking dog, you must learn! Yes, she must learn sit, stay, it like a dog, you must learn sit and stay, most girls learn this way in Italy, always in Italy, very good!" (Godber, 2007, p. 416). For him, his job is to break girls, making them do as their masters want from them and nothing else, just like animals. This is the reality about traffickers that they

see these victims as commodities that they can sell and buy according to the demand of the market which goes in line with Rubin's notion that "...one begins to have a sense of a systematic social apparatus which takes up females as raw materials and fashions domesticated women as products" (Rubin, 1975, p. 158), women for these traffickers are no more than products. This is the main reason behind the whole play, which is to display these horrible narratives of trafficking innocent victims.

While discussing her story with Ray, Anja reveals that the governments are involved in the trafficking industry. This is the most dangerous fact in the play, which is apparent in Ray's soliloquy:

Ray So during the World Cup between forty and sixty thousand prostitutes were imported into Germany? Nobody knows the actual figures, but between forty and sixty thousand. She said that they reckoned three million men paid for sex during this time! And all of the women paid taxes. She said it was a good time for her friend Katja and that the German government made four and a half billion dollars. She told me that her friends were looking forward to the Olympics in London: she said she knew a lot of girls who were looking forward to that! (Godber, 2007, p. 417)

This suggests that the governments both participate in and patronize the continuation of these human crimes. Indeed, it indicates unequivocally that victims of sex trafficking have turned into a tool for governments,

such as the German government, which benefit from human trafficking in the same way as traffickers since they license this sector to operate lawfully in their nations. As a result, this sector is institutionalized in these nations that support its existence for materialistic gains. This kind of institutionalization is mentioned by Foucault in *The History of Sexuality* (1988):

Now there is a trait which is fundamental to the economy of pleasures as it functions in the West, namely that sex acts as a principle of measure and intelligibility. For millennia the tendency has been to give us to believe that in sex, secretly at least there was to be found the law of all pleasure, and that this is what justifies the need to regulate sex and makes its control possible. (Foucault, 1980, pp. 190-191)

This narrative of regulating and institutionalizing sex is what the governments are trying to do, as in the case of the German and British Governments, since they implicitly stated that they are looking forward to the Olympics as it is good for their profit. They are regulating sex and making it lawful in their nations while they turn a blind eye to one of the main sources of this industry, namely, victims of sex trafficking.

Anti-Trafficking Narratives in *Sold*

Ray is the only character who represents the anti-trafficking narrative in the play. He was astonished to hear that the government itself was engaged in this ruthless crime,

which instigated him and made him try and fight back against this kind of legitimization of this crime, making him utter the most important questions to Anja, "Would you like to leave here?", "Would you not like to get out?", "If someone got you out?" (Godber, 2007, pp. 417-418). This falls in line with Foucault's notion of transgression:

Transgression is an action which involves the limit, that narrow zone of a line where it displays the flash of its passage, but perhaps also its entire trajectory, even its origin; it is likely that transgression has its entire space in the line it crosses. (Foucault, 1977, p. 34)

Ray's crossing of this line is transgressive in the sense that he helps the victim of human trafficking while no other character in the play has offered this kind of assistance since they are following the power of the institution, which, as we see, permits and regulates such heinous activities. He represents the counter-discourse of trafficking by getting himself involved in defying the institutionalization of human trafficking. He is not brainwashed by the narratives of traffickers. On the contrary, he is the first character who humanely treats Anja. He is sad to hear about all these, atrocities as she has awakened the human side inside him by telling him her devastating story, so he wants to help in every way possible.

In a soliloquy, the dramatist wants to engage the audience in his anti-narratives by revealing Anja's inner thoughts to the audience:

Anja If you could see me now, Mama, what would you say? I am not your little Anja. Anja is dead, Mama. She died when she went to Italy. Mama, do you miss me? Do you ever think of me? I think of you. I think of you many times. I could smell you, I could smell the house, I could smell the cooking, Mama. I could smell when you were making the soup. But now with each day the smell goes, I can't smell you too good. I can't dream you. I don't dream any more, Mama, I dream now only in English. I hope you are well, Mama, I hope you are well.

She is in tears.

I want to be home!

Music.

Lights.

(Godber, 2007, p. 420)

Anja's devastating remembering of her mother marks the harsh mental state that she lives in. She yearns for her past passionately, remembering even the smell of her mother's soup, but now the smell is going away as she is no longer able to even dream about her, as she dreams now in English; nightmarish dreams in a language that is not hers. Last, she wishes that what she is experiencing is not real, and she only wants to wake up to find herself at home again.

During a family dinner, Ray, Jack and their wives are discussing the issue of human trafficking. Ray asks Jack if he has come across the news about the World Cup, he explains that a single brothel in Cologne "...dealt with over six hundred

men a day during the World Cup!", "Eleven thousand square meters it measured. ... State controlled" and "Forty thousand girls they brought in!" (Godber, 2007, p. 422). This is one of the common narratives adopted by some countries to traffic women for sexual amusement in brothels and prostitution in public international festivals like the World Cup, which maintains the trafficking industry as the state is allowing them to bring prostitutes to the country, and let them be involved in prostitution legally.

In this notion, Taylor explains Foucault's concept of disciplinary power as he says that "The concept of disciplinary power concerns individuals. As Foucault notes with reference to what he takes to be the ideal exercise of this power, "We are never dealing with a mass, with a group, or even, to tell the truth, with a multiplicity: we are only ever dealing with individuals"" (Taylor, 2014, p. 41). They are dealing with individuals; controlling them and their lives while getting profit from them. The author wants the audience to comprehend the reality that their country is aligning with the trafficking narratives and maintaining its existence.

Ray then expresses his offer to help Anja, saying, "I want to help you.", "Can I try and help you?" (Godber, 2007, p. 433). This is part of the anti-trafficking narrative in the play used by the author to fight back against this crime. Ray's help would definitely cause him problems, but he is defying the common narrative of trafficking by offering such help, which goes directly in line with Foucault's concept

of Problematization "Problematizations formulate the fundamental issues and choices through which individuals confront their existence" (Gutting, 2005, p. 122). Ray's attempt to help would be conceived as a problem by the traffickers, who would react violently to this threat to their business as they exploit their sex traffickers, covered and legitimized by the institution.

Ray does not have enough money to get Anja out, so he had to put a mortgage on his house to get the money. Actually, mortgaging the house is a real threat to the union of Ray's family, which can be understood as the author's mini-narrative of fighting back the trafficking narratives through portraying a character who went this far in helping a victim to be free at the expense of his family institution. Ray's volunteering to purchase Anja's freedom is aimed at alerting the people's frame of mind towards the atrocities of human trafficking narratives and the urgent need to create anti-narratives to this heinous crime against humanity.

Ray has taken an action that no other character has even thought of. He paid twenty thousand dollars to gain Anja's freedom, which indicates his true goodness as a human being who would act and choose the right thing to do when needed. His action is done as a transgressive act, Foucault mentions "The limit and transgression depend on each other for whatever density of being they possess: a limit could not exist if it were absolutely uncrossable and, reciprocally, transgression would be pointless if it merely crossed a

limit composed of illusions and shadows" (Foucault, 1977, p. 34). Ray has crossed a limit by helping Anja pay off her debt. This lies as part of the anti-trafficking narrative in the text, represented by the act that Ray has done to free a victim who was wrongfully duped and victimized by the traffickers. To Ray, she is a human being with a life, and he is not ashamed of what he has done; rather, on the contrary, he is proud that he has saved a life "...I've made a difference..." (Godber, 2007, p. 438). What he wants is to make a difference, not only by saying but through actions that fight back against the traffickers.

During a scene with Ray, Jack, their wives and Anja. Anja starts to explain what it is like to be a victim who is both forced to work against her will and a sex slave:

Anja They make you make sex all time, with period, with no period, it is not matter, they take out some girls' teeth if they have small mouth.

Gemma Oh hell!

Anja One girl is twelve and they sell her much money in Middle East. Turkish men are very bad, they think we are nothing but meat.

Gemma It is just slavery, isn't it?

Jack Christ, well of course it is! (Godber, 2007, p. 454)

This adds more depth of knowledge to the characters and the audience about the harsh circumstances that these victims have to endure throughout their sex enslavement. The author is dramatizing Anja's situation

as he wants the audience to be aware that this crime is labelled as slavery since victims of such a crime are enslaved and exploited in every way possible by the traffickers. It indicates his intention to fight back and try to abolish the new slave trade by employing such terminology. This idea is more crystallized when Ray states, "How can things change unless we all do something about it?" (Godber, 2007, p. 454). Again, Ray emphasizes that actions speak louder than words. He invites the audience to think of counter-narratives that could help the victims of sex trafficking against the humanization and institutionalization of these atrocious non-human crimes.

Ray reveals that Anja is going to be their cleaner and they are paying her. It is all part of Ray's contribution to save this innocent victim. He doesn't recognize any limit in his transgressing act which goes in line with Foucault's explanation of transgression "... no limit can possibly restrict it" (Foucault, 1977, p. 36). It is also the author's narrative of telling the audience that these victims are forced to work in the sex industry and that they would be happy to be integrated into society if they had the chance.

Now Anja is temporarily free from the victimization of traffickers, and she is trying to integrate herself into this society, but unfortunately, this does not last long. In the pub that Anja goes to, she is noticed by Kate, one of the staff members of the brothel Anja used to work in. Kate goes and tells Les and Pat, the pub owners, so all three of them start the exploitation process again. Les confronts Anja that he knows about her past, then he tells her, "And I thought well maybe

there's a way of working it, you know, maybe there's a way of making it work. Coz I mean we could always work something out couldn't we. Because I dare say if you've done it once, you've done it a hundred times." (Godber, 2007, p. 479). He hints that he is lusting after her, as she is used to these kinds of things. Anja immediately tries to leave, but she is prevented by him as he continues with his narrative about making a date with her. Meanwhile, Kate enters and they both start paving the way to rape her. Anja responds to their narrative saying "No ... I not do this any more." (Godber, 2007, p. 481). She is clearly not willing to be a victim once more, but unfortunately, Les and Kate threaten her with the police, and she has to comply with their demands. They tell her:

Les drags Anja to a chair. He throws Anja to the ground as he begins to undo his trousers.

Kate And when you've done Les, you can do me. You hear that, when you done Les, you can get down here and do me ...

Les (to Anja) You hear that?

Anja Yes! Yes! (Godber, 2007, p. 483)

They also bring Pat to the scene to rape Anja as well. Anja's response is devastating, saying 'Yes' to the thing she hates the most and becoming a victim again, only this time not to the traffickers, but to people who are brainwashed by the trafficking narrative and making use of it for their own desires. She is raped multiple times by them and

eventually pushed from the stairs by Pat and died. Though the play ends tragically with the failure of Anja to achieve her dream of freedom, the playwright circulates an anti-trafficking narrative through the character of Ray, who jeopardizes his family union to save a victim, which in turn would raise public awareness of the urgent need to end this heinous crime against humanity.

CONCLUSION

The study examines the narratives and anti-narratives of human trafficking in John Godber's *Sold*. It concludes that there are two kinds of narratives in the play. The first one is the trafficking narrative that was highlighted and analyzed in light of Gayle Rubin's concept of "The Traffic in Women: Notes on the Political Economy of Sex", which shows that the traffickers utilize narratives of poverty, illiteracy and Western supremacy to traffic these victims. Anja was duped into believing that she was going to achieve her dreams in the United Kingdom. She was promised by the traffickers that she would achieve her dream of becoming a dancer, while in reality, she was trapped in a debt bondage that led to her victimization for forced labor and sexual purposes. More importantly, the study concludes that the author has circulated an anti-trafficking narrative in the play represented by the character of Ray. Ray's actions have been analyzed using Foucault's concept of Transgression, which helped him to divert from the common institutional narrative of trafficking women, as in the case of Anja. Ray's family union was jeopardized as he

put a mortgage on his house to help pay Anja's debt. It is uncommon that a man would jeopardize the union of his family for the sake of a victim of human trafficking, but this is the author's way of circulating an anti-narrative that fights back against the trafficking crime. Finally, the study implies the workability of Foucault's theoretical framework as a strategy of releasing the hidden discourses in the literary texts, which are marginalized by the common institutional discourses. In *Sold*, the study contributes to the understanding of hidden anti-narratives of human trafficking, which are spotlighted by Foucault's transgression.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor for his invaluable guidance and encouragement throughout this work. I am also thankful to my colleagues and friends for their constructive feedback and support. Finally, I extend my appreciation to my family for their unwavering patience and motivation.

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Review Article

How to Boost Entrepreneurial Intentions Among Students? A Systematic Literature Review

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ABSTRACT

Entrepreneurial intention plays a crucial role in creating new entrepreneurs, as it serves as a foundation that directs individuals to start and develop their ventures. Although many studies have attempted to examine the significance of entrepreneurial intention among students, the existing literature lacks a comprehensive analysis of how entrepreneurial education impacts students' entrepreneurial intention in schools. Therefore, this study aims to provide a comprehensive analysis of the existing literature on the role of entrepreneurial education in strengthening students' entrepreneurial intentions. This study applies the PRISMA framework to ensure clear and comprehensive reporting of systematic reviews through three stages: identification, screening, and eligibility assessment. There were 62 articles analyzed during the 2012-2023 publication period. This study was conducted through a comprehensive search of academic search engines and meticulously selected, impartial journals. The findings of this study reveal that several key factors, including education, environmental support, personal traits, and entrepreneurial skills, influence students' entrepreneurial intentions. Finally, this study offers suggestions for future research directions to address the identified knowledge gaps efficiently.

Keywords: Entrepreneurial intention, entrepreneurial skills, entrepreneurship education, environmental support, personal traits

ARTICLE INFO

Article history:

Received: 06 August 2024

Accepted: 03 February 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.07>

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INTRODUCTION

Investing in education that focuses on entrepreneurship is a strategic step to foster entrepreneurial intentions among students. The motivation behind the importance of investing in entrepreneurial education is

the aspiration of society and institutions to increase the rate of business creation in various national and regional environments (Ayob, 2021). The integration of entrepreneurial intention through education embedded with entrepreneurial principles can enhance knowledge and practical skills, motivating students to consider careers in entrepreneurship. Additionally, through entrepreneurial education, students are introduced to concepts such as business management, innovation, and risk-taking, all of which are essential components in the business world. Policymakers and experts recognize that effective entrepreneurial education is one of the foundations for sustainable economic growth and technological advancement (Pathak, 2019). Numerous studies have investigated the critical role of entrepreneurial education in shaping entrepreneurial intention among students (Ahmed et al., 2020; Haddoud et al., 2022; Onjewu et al., 2021; Sutiadiningsih & Mahfud, 2023; Tseng et al., 2022). Essentially, well-designed entrepreneurial education can enhance students' entrepreneurial intentions, encouraging them to view entrepreneurship as a viable and attractive career path.

While entrepreneurial education is crucial in shaping students' entrepreneurial intentions, it is not the only influencing factor. Entrepreneurial intention is often associated with two theories, namely, the Theory of Planned Behavior (TPB; Ajzen, 2011) and the Entrepreneurial Event Model (EEM; Shapero & Sokol, 1982). The relationship between TPB and EEM in the concept of entrepreneurial intention can

be seen through the relationship between psychological and situational factors that influence an individual's decision to become an entrepreneur. In TPB, attitudes towards behavior reflect an individual's assessment of the advantages or disadvantages of entrepreneurship, which is closely related to perceived desirability in EEM, namely the extent to which someone considers entrepreneurship an attractive option. Perceived behavioral control in TPB is related to perceived feasibility in EEM, which refers to an individual's belief in their ability to overcome the challenges and resources needed to start a business. TPB highlights the critical role of social influence or subjective norms in shaping entrepreneurial intention. Meanwhile, instead of discussing the role of social aspects, EEM emphasizes the importance of propensity to act, which refers to a person's tendency or desire to undertake the entrepreneurial process or explore and implement entrepreneurial opportunities. Both theories suggest that entrepreneurial intentions emerge due to the interaction between internal factors (such as attitudes and self-control) and external factors (such as opportunities or motivating events).

Personal traits such as self-confidence, risk-taking, and mental toughness play a massive role in driving individuals to enter the world of entrepreneurship. Previous studies indicate that students possessing these traits are more likely to have strong entrepreneurial intentions (Bazkiaei et al., 2020; Frago et al., 2020; Maheshwari et al., 2023; Nuseir et al., 2020; Pouratashi, 2015; Velástegui & Chacón, 2021). Students

are not only inspired by what they learn in class but are also driven by personalities that naturally align with the challenges and dynamics of the business world. In addition to personal traits, environmental support and entrepreneurial skills are also significant factors. Support from family, friends, and the community can provide the moral and material encouragement students need to start their businesses (Ao & Liu, 2014; Jena, 2020; Kusumojanto et al., 2021; Neneh, 2022; Zhuang & Sun, 2023). Research shows that students receiving strong environmental support are more likely to realize their entrepreneurial intentions (Ao & Liu, 2014). On the other hand, entrepreneurial skills, including management, marketing, and financial management capabilities, are also critical (Arranz et al., 2019; Najafabadi et al., 2016; Nuseir et al., 2020; Pouratashi, 2015; Suratno et al., 2021; Wibowo, Narmaditya, Suparno, et al., 2023). Without these practical skills, even strong entrepreneurial intentions may not materialize into successful businesses. It is the combination of entrepreneurial education, personal traits, environmental support, and appropriate skills that collectively shape students' entrepreneurial intentions effectively.

Despite the increase in research on the influence of entrepreneurial education on enhancing students' entrepreneurial intention, the interaction of entrepreneurial education with other significant factors in influencing entrepreneurial intention remains unclear. The dispersed knowledge on this evolving theme requires

consolidation and investigation. This study aims to systematically evaluate the literature and analyze the factors that determine students' entrepreneurial intentions and their relationship to entrepreneurial education. To achieve this, the study is guided by the following research questions: (1) What are the trends in articles related to the role of entrepreneurial education in entrepreneurial intention? (2) What factors determine entrepreneurial intention? (3) How is entrepreneurial education linked to entrepreneurial intention? The findings of this paper will provide valuable contributions to the existing entrepreneurship literature, particularly in understanding the factors influencing the strengthening of students' entrepreneurial intentions. Additionally, this will aid researchers, policymakers, and higher education institutions in increasing the number of entrepreneurs.

METHODS

This study focuses on discussing the role of entrepreneurial education in shaping entrepreneurial intention. A systematic literature review (SLR) was used to investigate the research questions. To conduct a systematic review, this study followed the procedures outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) by Page et al. (2021), widely used by academics for systematic reviews. Additionally, the implementation of this approach enhances the clarity and accuracy of the literature review through systematic evaluation and the use of flow diagrams. Undoubtedly,

one of PRISMA's benefits is its ability to set transparent, consistent, and rigorous criteria for generating research reports through careful procedures (Jamaluddin & Saibani, 2021). The systematic literature review process includes structuring the research question, systematic searching strategies, and data extraction and analysis (Gough et al., 2012). This review was limited to English-language research articles discussing the role of entrepreneurial education in shaping entrepreneurial intention.

Structuring the Research Question

The study questions were developed using the Population, Interest, and Content (PICO) theory (Lockwood et al., 2015). According to this theory, we included

"school students" as the population, "entrepreneurial education" as the subject of interest, and "entrepreneurial intention" as the content subject. As a result, the research question is formulated as follows: "How does entrepreneurial education contribute to shaping students' entrepreneurial intention?"

Systematic Searching Strategies

This study implemented the PRISMA framework to ensure clear and comprehensive reporting of systematic reviews. The PRISMA framework consists of three distinct stages: "Identification," "Screening," and "Eligibility assessment." Figure 1 illustrates the systematic review process used in this investigation following the PRISMA paradigm.

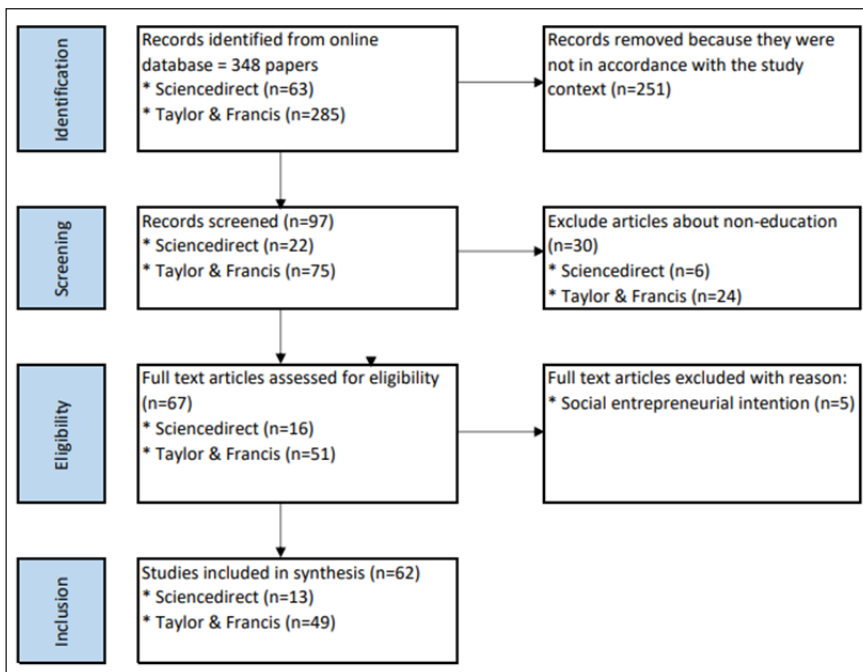


Figure 1. PRISMA flow diagram for identification of studies

Identification

Literature sources were sought in the form of research articles. The literature search for this study was conducted using two online catalogs: Taylor and Francis Online and ScienceDirect. Both of these online platforms are reputable and well-established publishers that maintain quality control, content curation, and the reputation of the journals they manage. Article searches in the Taylor and Francis Online catalog were conducted at the URL <https://www.tandfonline.com>, and ScienceDirect searches were conducted at the URL <https://www.sciencedirect.com>. In the first step, we collected studies through titles and/or abstracts containing specified search terms, adopting keyword connections using Boolean operators (AND). Table 1 shows the literature search indicators. The search terms for this study were ("entrepreneurial intention" OR "entrepreneurship intention") AND ("entrepreneurship education" OR "business education" OR "entrepreneurship

training" OR "entrepreneurial learning"). The literature used in this study was limited to publications between 2012 and 2023 and in English. This stage identified 348 articles, including 63 from ScienceDirect and 285 from Taylor and Francis Online.

Screening

The second refinement round involved screening sources that were irrelevant to the study's focus. A total of 251 articles were excluded for not aligning with the study's focus on the role of entrepreneurial education in enhancing students' entrepreneurial intention. Subsequently, a hierarchical logic was used to analyze the titles, keywords, and abstracts of the publications. Initially, 97 articles were evaluated for their titles and abstracts. During the evaluation of the inclusion criteria for titles and abstracts in Table 2, we identified 30 articles from non-education contexts. At this stage, 67 relevant articles were identified.

Table 1
Literature search indicators

Publisher	Search Term	Period	Article Type
ScienceDirect	("entrepreneurial intention" OR "entrepreneurship intention") AND ("entrepreneurship education" OR "business education" OR "entrepreneurship training" OR "entrepreneurial learning")	2012–2023	Research article
Taylor and Francis online	("entrepreneurial intention" OR "entrepreneurship intention") AND ("entrepreneurship education" OR "business education" OR "entrepreneurship training" OR "entrepreneurial learning")	2012–2023	Research article

Table 2
Inclusion and exclusion criteria

Screening		
	Inclusion criteria	Go to the next step
Title Screening	The title included all these keywords: “entrepreneurial intention,” “entrepreneurship intention,” “entrepreneurship education,” “business education,” “entrepreneurship training,” “entrepreneurial learning.”	The title was unclear or included one of the following keywords: “entrepreneurial intention,” “entrepreneurship education,” “business education,” “entrepreneurship training,” or “entrepreneurial learning.”
Keywords screening	“entrepreneurial intention,” “entrepreneurship intention,” “entrepreneurship education,” “business education,” “entrepreneurship training,” “entrepreneurial learning” were found in the article's keywords	The keywords were unclear or included one of the following keywords: “entrepreneurial intention,” “entrepreneurship education,” “business education,” “entrepreneurship training,” or “entrepreneurial learning.”
Abstract Screening	The problem statement clearly investigates the role of entrepreneurship education in cultivating entrepreneurial intentions in students.	The keywords problem statement unclearly investigates the role of entrepreneurship education in cultivating entrepreneurial intentions in students.
Eligibility assessment		
	Inclusion criteria	Exclusion criteria
Introduction, methodology, and conclusion review	The study discusses two aspects: a) the role of entrepreneurship education on students' entrepreneurial intentions and b) the antecedent factors influencing students' entrepreneurial intentions.	Studies that discuss a) entrepreneurial intentions outside the school scope and b) the impact of entrepreneurial intentions.

Eligibility Assessment

At this stage, 67 papers were reviewed for eligibility by reading the introduction, methodology, and conclusions sections. We applied more precise inclusion and exclusion criteria, as shown in Table 2, based on the methods presented by Pranugrahaning et al. (2021). After reviewing the full papers, we identified five articles with a focus on social entrepreneurial intention, which were excluded from the main data analysis.

Finally, we used 62 articles for extraction and analysis.

Data Extraction and Analysis

The thematic analysis aims to find and understand the most important aspects of the data related to the research topic. This method attempts to summarize the data (Braun & Clarke, 2019). Thematic analysis was used to examine 62 selected articles to answer the research questions

on the role of entrepreneurial education in cultivating students' entrepreneurial intentions. The purpose of this analysis is to build a consensus in research conclusions and to present a unified view of the studied topic (Braun & Clarke, 2019) concerning the role of entrepreneurial education in shaping students' entrepreneurial intentions. To begin the analysis, we reviewed the full papers several times and used NVivo 12 to create several coding frameworks. The main objectives, research questions, applied methodologies, and results of the selected studies were revealed in the initial coding round. To achieve consistency between the research objectives and results, we performed a second round of coding.

RESULTS

The distribution of article publications based on journal names, sourced from online catalogs such as Taylor and Francis Online and ScienceDirect, reveals a total of 62 articles addressing the role of entrepreneurship education in enhancing students' entrepreneurial intentions, as depicted in Figure 2. These 62 articles were published in 29 journals. Figure 2 illustrates that the journals most frequently featuring topics on the role of entrepreneurship education in increasing entrepreneurial intentions are *The International Journal of Management Education*, *Studies in Higher Education*, and the *Journal of Education for Business*. These three journals published a total of 7 articles from 2012 to 2023 that discuss the role of entrepreneurship education in strengthening students'

entrepreneurial intentions. This is followed by *Cogent Business & Management* (6 articles), *Cogent Education* (5 articles), and various other journals.

Between 2012 and 2023, the trend in article publications suggests a growing interest in the relationship between entrepreneurship education and students' entrepreneurial intentions. In 2023 alone, 13 out of the 62 articles were published (see Figure 3). In 2022, 11 articles were published. In the earlier years, the number of publications ranged from 1 to 8 articles annually.

The bibliometric analysis of this study illustrates the distribution of article publications on the role of entrepreneurship education in fostering entrepreneurial intentions based on their publishers, as depicted in Figure 4. Routledge dominates the number of publications, with 36 articles from 2012 to 2023. This is followed by Elsevier (11 articles), Cogent (11 articles), the European Academy of Management and Business Economics (2 articles), John Wiley & Sons (1 article), and Taylor & Francis (1 article).

The bibliometric analysis of this study demonstrates the distribution of article publications on the role of entrepreneurship education in fostering entrepreneurial intentions based on their publishers, as shown in Figure 4. Routledge leads in the number of publications, with 36 articles from 2012 to 2023. This is followed by Elsevier (11 articles), Cogent (11 articles), the European Academy of Management and Business Economics (2 articles), John Wiley

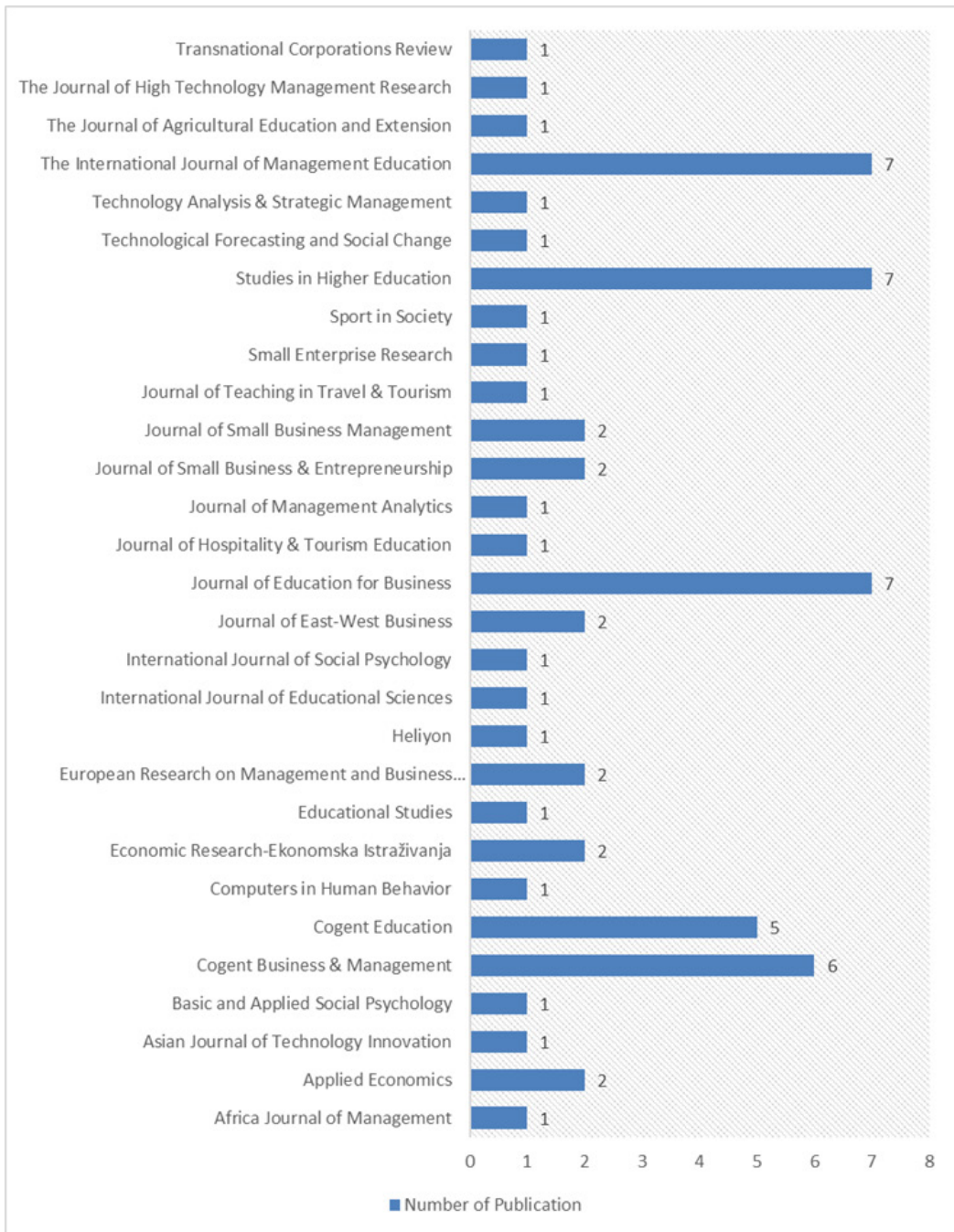


Figure 2. Number of publications and the journal titles

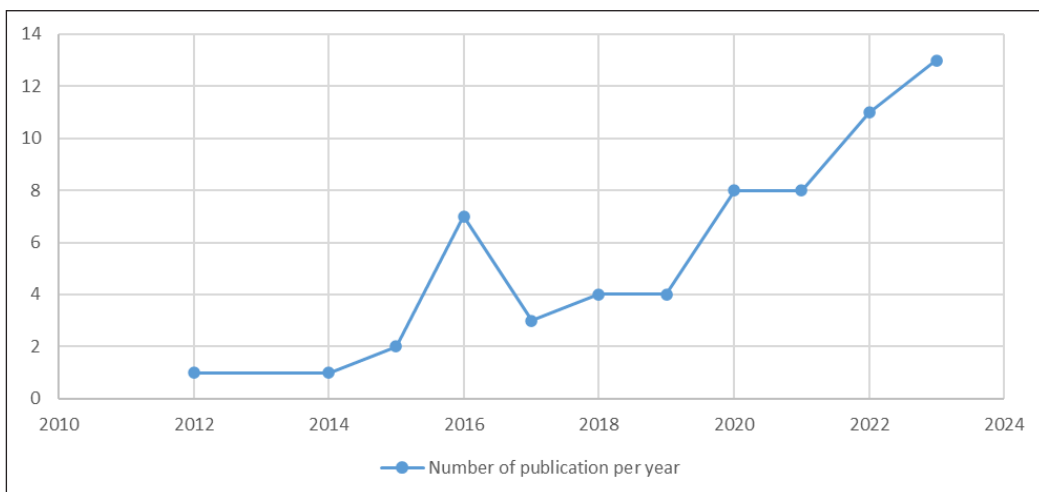


Figure 3. Annual distribution of the included articles

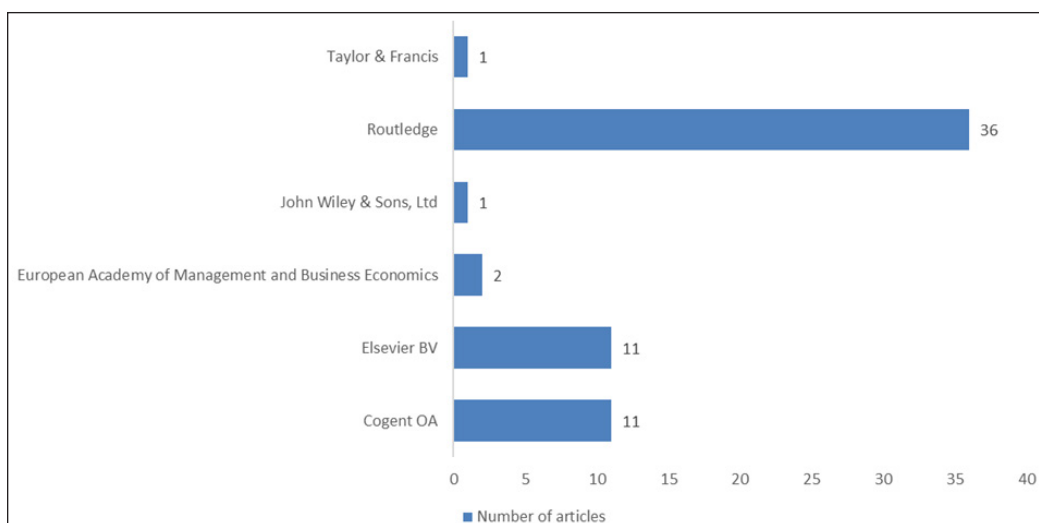


Figure 4. Number of publications and the publisher

& Sons (1 article), and Taylor & Francis (1 article).

Our study also examines the factors that contribute to students' entrepreneurial intentions, as illustrated in Figure 5 and Table 3. Qualitative analysis of the 62 articles using NVivo 12 reveals that several additional factors influence the role of

entrepreneurship education in fostering students' entrepreneurial intentions. Numerous terms describe these contributing factors, which we have summarized into four key dimensions: personal traits, entrepreneurship education, environmental support, and entrepreneurial skills.

Table 3
Antecedent factors influencing students' entrepreneurial intentions

Dimension	Sub-Dimension	Factors	Sources
Education	Education	Entrepreneurship Education	Maresch et al. (2016), Anwar et al. (2023), Zhuang & Sun (2023), Q. D. Nguyen & Nguyen (2023)
		Lecturer's competency	Iwu et al. (2021), Ismail (2022)
		Prior learning experiences	Bonesso et al. (2018)
		Entrepreneurial Mentoring	Baluku et al. (2021)
Personal		Entrepreneurship workshop	Lara-Bocanegra et al. (2022)
		Experiential learning	Taneja et al. (2023)
	Self-efficacy	Perceived behavioral control	Maresch et al. (2016), Tseng et al. (2022), Sancho et al. (2020), C. Q. Nguyen et al. (2022), Ferri et al. (2023)
		Entrepreneurial self-efficacy	Uysal et al. (2022), Nowiński et al. (2019), Anwar, Thoudam, et al. (2022), Al-Jubari et al. (2023), Kumar et al. (2023), Kisubi et al. (2021)
		Perceived feasibility	Lara-Bocanegra et al. (2022)
	Motivation	Entrepreneurial Motivation	Anwar et al. (2023), Martínez-Cañas et al. (2023), Anwar, Alalyani, et al. (2022)
		Financial motivation	Barba-Sánchez & Atienza-Sahuquillo (2018)
		Pull driving	Martínez-Cañas et al. (2023)
		Need for independence	Barba-Sánchez & Atienza-Sahuquillo (2018)
	Attitude	Perceived desirability	Lara-Bocanegra et al. (2022)
	Entrepreneurship Attitude	Maresch et al. (2016), Tseng et al. (2022), Jena (2020), Ince et al. (2023), Sancho et al. (2020), C. Q. Nguyen et al. (2022), Ferri et al. (2023)	
	Entrepreneurial orientation	Anwar, Alalyani, et al. (2022)	
	Perceived risk	Martínez-Cañas et al. (2023)	
	Opportunity recognition	Martínez-Cañas et al. (2023), Zhuang and Sun (2023), Anwar, Thoudam, et al. (2022)	
	Personal Initiative	Solesvik (2017)	
	Self-esteem	Chen et al. (2016)	
Passion	Entrepreneurial Passion	Anwar et al. (2023), Karimi (2020), Neneh (2022)	
Mindset	Entrepreneurial mindset	Cui & Bell (2022), Michelle & Tendai (2016), Mukhtar et al. (2021)	
Personality	Entrepreneurial personality	-	

Table 3 (continue)

Dimension	Sub-Dimension	Factors	Sources
Environmental Support	Psychology	Personality traits	Pouratashi (2015), Jang et al. (2019), Fragooso et al. (2020), Najafabadi et al. (2016)
		Big-five personality	Bazkiaei et al. (2020)
		Entrepreneurial identity	Lheureux & Auzoult (2017)
	Subjective norms	Psychological Capital	Baluku et al. (2021)
		Subjective norms	Tseng et al. (2022), C. Q. Nguyen et al. (2022), Karimi (2020), Chukwuma-Nwuba (2018), Mei et al. (2016)
	Family	Entrepreneurial environment	Jena (2020), Ao & Liu (2014), Kusumojanto et al. (2021)
		Institutional environment	Zhuang & Sun (2023)
		Support system	Misoska et al. (2016)
		Push driving	Martínez-Cañas et al. (2023)
		Autonomy support	Puerta-Sierra & Puente-Díaz (2023)
Competencies	Peer	Family business experiences	Uysal et al. (2022)
		Family background	Herman & Stefanescu (2017)
	Culture & Climate	Family economic education	Suratno et al. (2021)
		Peer groups	Suratno et al. (2021)
	Competencies	Cultural value	Chukwuma-Nwuba (2018)
		Business climate	Misoska et al. (2016)
		Entrepreneurial culture	Mukhtar et al. (2021)
		Economic literacy	Suratno et al. (2021)
		Entrepreneurial capacity	Q. D. Nguyen & Nguyen (2023), Nuseir et al. (2020)
		Entrepreneurial skill	Ferri et al. (2023), Michelle & Tendai (2016), Najafabadi et al. (2016)
Entrepreneurial knowledge	Innovativeness	Maheshwari et al. (2023)	
	Emotional, social, and cognitive competency	Bonesso et al. (2018), Velástegui & Chacón (2021)	
	Entrepreneurial knowledge	Wibowo, Narmaditya, Saptono, et al. (2023)	

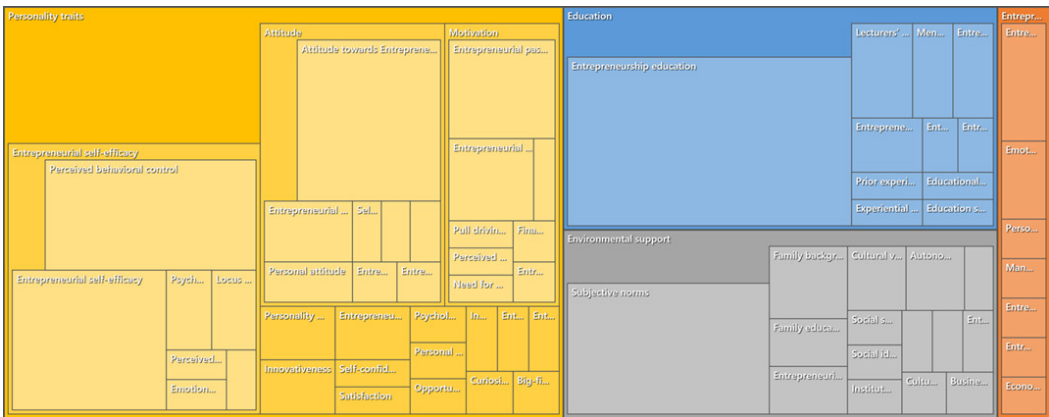


Figure 5. Categorization of antecedent factors in fostering students' entrepreneurial intentions

The 62 articles highlight the significant role of personal traits in the relationship between entrepreneurship education and students' entrepreneurial intentions. This dimension includes factors such as attitude, the Big Five personality traits, curiosity, entrepreneurial mindset, entrepreneurial personality, entrepreneurial self-efficacy, innovative cognitive style, motivation, personality traits, and psychological characteristics. These factors greatly contribute to enhancing the role of entrepreneurship education in increasing students' entrepreneurial intentions.

Meanwhile, the dimension of environmental support also plays an important role in the relationship between entrepreneurship education and entrepreneurial intentions. Environmental support factors in this study include subjective norms, family background, family education, entrepreneurial culture, cultural values, social support, social identity, institutional environments, autonomy support, cultural experiences,

business climate, and support systems. Lastly, the dimension of entrepreneurial skills encompasses entrepreneurial capacity, emotional competency, personal capacity, management capacity, entrepreneurial skills, entrepreneurial knowledge, and economic literacy.

DISCUSSIONS

Thematic analysis was conducted to ascertain the research objectives and conclusions of the included publications. To evaluate the primary research aims, we conducted a thorough screening of factors influencing entrepreneurial intentions across 62 full-paper articles using NVivo 12 coding analysis. During this phase, numerous antecedent factors affecting entrepreneurial intentions were identified under various terminologies. Subsequently, we performed a contextual analysis of antecedent factors influencing entrepreneurial intentions among students. The study findings reveal that students' entrepreneurial intentions are influenced by four critical dimensions:

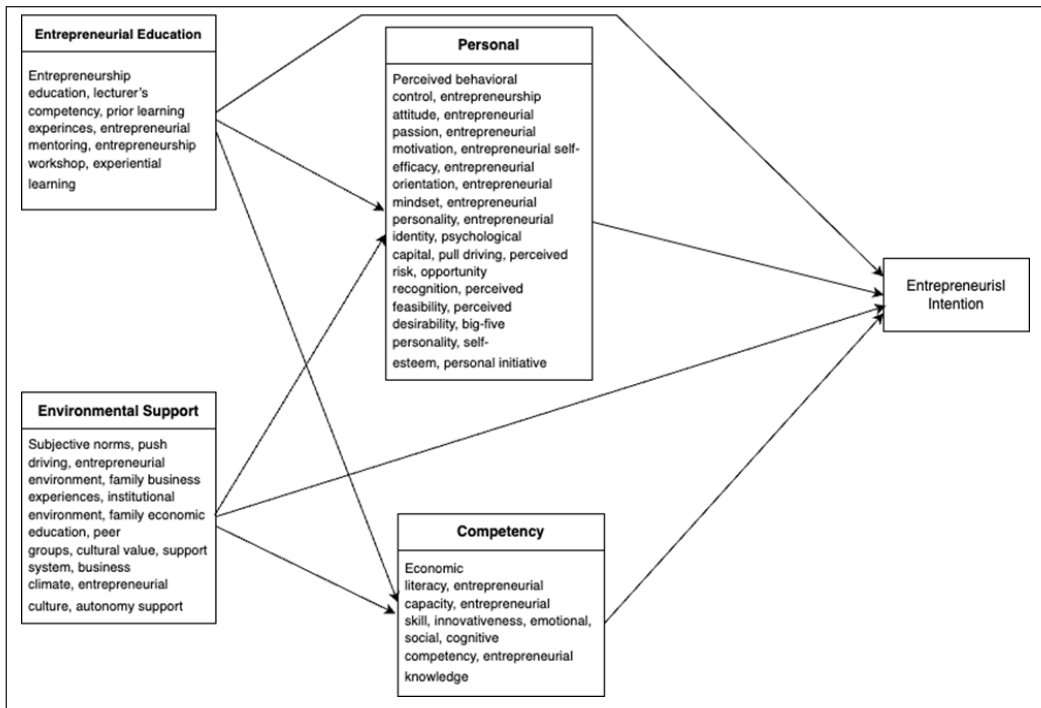


Figure 6. Relationships among dimensions of antecedents to entrepreneurial intentions

(1) entrepreneurship education dimension, (2) personal dimension, (3) environmental support dimension, and (4) skill dimension (Figure 6).

Entrepreneurial Education Dimensions

Entrepreneurship education plays a crucial role in enhancing entrepreneurial intentions among students. Several studies have highlighted the relationship between entrepreneurship education and entrepreneurial intentions. For instance, research by Anwar et al. (2023) indicates that entrepreneurship education has a positive impact on increasing entrepreneurial intentions. Additionally, Bazkiaei et al. (2020) demonstrated that entrepreneurship education has a significant

positive relationship with and influence on entrepreneurial intentions. Other studies also support similar findings, showing that entrepreneurship education directly enhances students' entrepreneurial intentions (Haddoud et al., 2022). Herman and Stefanescu (2017) underscore that business students perceive a higher effectiveness of entrepreneurship education and its greater positive influence on entrepreneurial intentions compared to engineering students.

This literature review identifies that entrepreneurship education encompasses entrepreneurial training, entrepreneurship workshops, entrepreneurial experiences, entrepreneurial activities, experiential learning, entrepreneurial mentoring, prior experiences, and educational experiences.

Numerous previous studies highlight the contribution of entrepreneurship education in fostering entrepreneurial intentions within educational institutions (Cui & Bell, 2022; Ferri et al., 2023). The quality of entrepreneurship education heavily depends on the quality of teaching delivered by teachers and lecturers. Previous studies reveal that perceptions of teacher competence show a moderate positive correlation with students' entrepreneurial intentions (Iwu et al., 2021). Additionally, various entrepreneurship programs, such as entrepreneurial mentoring (Baluku et al., 2021), entrepreneurship workshops (Lara-Bocanegra et al., 2022), and experiential learning-oriented entrepreneurship education (Taneja et al., 2023) also contribute to instilling entrepreneurial intentions among students.

Entrepreneurship education plays a crucial role in enhancing entrepreneurial intentions among students by equipping them with the necessary skills and knowledge to start and run businesses (Lara-Bocanegra et al., 2022; Maheshwari et al., 2023). Through structured curricula, students are taught fundamental entrepreneurship concepts such as identifying business opportunities, developing business plans, financial management, and marketing strategies. Entrepreneurship education programs often include real-life case studies, practical projects, and mentoring from successful entrepreneurs, all of which contribute to building students' confidence and capabilities in entrepreneurship. Research indicates that intensive entrepreneurship

education can enhance students' interest and readiness to enter the business world, providing them with a strong foundation to become successful entrepreneurs (Q. D. Nguyen & Nguyen, 2023).

Personal Dimensions

The findings of this study indicate that one dimension predicting students' entrepreneurial intentions is the personal dimension. The personal dimension significantly reinforces students' entrepreneurial intentions, encompassing individual characteristics that influence an individual's intention to engage in entrepreneurship. In this study, the personal dimension includes attitude (Amofah et al., 2020; Baluku et al., 2021), Big-five personality traits (Bazkiaei et al., 2020), curiosity (Puerta-Sierra & Puente-Díaz, 2023), entrepreneurial mindset (Cui & Bell, 2022; Mukhtar et al., 2021), entrepreneurial personality (Maheshwari et al., 2023), entrepreneurial self-efficacy (Nuseir et al., 2020; Velástegui & Chacón, 2021), entrepreneurial self-typicality (Lheureux & Auzoult, 2017), innovative cognitive style (Mirjana et al., 2018), innovativeness (Maheshwari et al., 2023; Samydevan et al., 2021), motivation (Anwar et al., 2023; Anwar, Alalyani, et al., 2022; Barba-Sánchez & Atienza-Sahuquillo, 2018), personality traits (Fragoso et al., 2020; Pouratashi, 2015) and psychological characteristics (Najafabadi et al., 2016).

Personal characteristics are a primary factor motivating students to take the initial steps in starting a business (Fragoso et al.,

2020). For instance, entrepreneurial self-confidence instills in students the belief that they have the capability to overcome challenges and achieve entrepreneurial success (Nuseir et al., 2020; Velástegui & Chacón, 2021). Moreover, motivation also plays a key role in fostering entrepreneurial intentions among students, as these internal and external drives prompt them to take the initiative and action (Anwar et al., 2023; Martínez-Cañas et al., 2023). Internal motivation or pull factors (Martínez-Cañas et al., 2023), such as the desire for financial freedom (Barba-Sánchez & Atienza-Sahuquillo, 2018) and the aspiration for independence (Barba-Sánchez & Atienza-Sahuquillo, 2018), motivate students to diligently pursue entrepreneurial opportunities. Meanwhile, external motivation or push factors (Martínez-Cañas et al., 2023), such as social support (Neneh, 2022) and support systems (Misoska et al., 2016), along with opportunities offered through entrepreneurship education programs, further strengthen students' entrepreneurial intentions. When motivated, students are more likely to identify and respond to business opportunities, develop innovative ideas, and commit to running their businesses despite various obstacles. By developing these individual characteristics, students become better prepared and motivated to pursue entrepreneurial opportunities.

Environmental Support Dimension

The role of entrepreneurship education can be maximized in enhancing students'

entrepreneurial intentions by optimizing the environmental support dimension. There are various factors within the environmental support dimension, but in this study, environmental support includes subjective norms (Arranz et al., 2019; Karimi, 2020), family background (Jena, 2020; Kisubi et al., 2021), family education (Kusumojanto et al., 2021; Suratno et al., 2021), entrepreneurial culture (Mukhtar et al., 2021), cultural values (Chukwuma-Nwuba, 2018), social support (Neneh, 2022), social identity (Lheureux & Auzoult, 2017), institutional environments (Zhuang & Sun, 2023), autonomy support (Puerta-Sierra & Puente-Díaz, 2023), cultural experiences (Bonesso et al., 2018), business climate (Misoska et al., 2016), and support systems (Misoska et al., 2016).

The environmental support dimension plays a crucial role in strengthening students' entrepreneurial intentions by providing an environment that supports and facilitates their development as future entrepreneurs. Support from family, friends, and the school community plays a crucial role in providing moral encouragement and necessary resources to start businesses (Karimi, 2020; Neneh, 2022). For example, supportive families may provide initial capital or business advice based on their own experiences (Uysal et al., 2022). Additionally, a conducive business climate characterized by easy access to information, entrepreneurship training, government support, and financial resources provides significant encouragement for students to view entrepreneurship as a viable and

attractive career option (Misoska et al., 2016). Furthermore, the presence of strong business networks and active entrepreneurial communities also provides inspiration and real-life examples for students, thereby boosting their confidence in taking initial steps toward entrepreneurship. Schools should create a positive business climate during the process of fostering students' entrepreneurial intentions through education.

Educational institutions offering entrepreneurship programs, workshops, and business competitions also significantly contribute to strengthening entrepreneurial intentions (Zhuang & Sun, 2023). Studies indicate that students who receive strong environmental support tend to be more confident in taking risks and more resilient in facing challenges (Ao & Liu, 2014). Additionally, teachers need to foster an entrepreneurial culture within the school environment. This entrepreneurial culture is crucial for fostering students' entrepreneurial intentions, as it creates an environment that encourages innovation, creativity, and risk-taking (Mukhtar et al., 2021). Implementation within schools can be achieved through various methods, such as integrating entrepreneurship curricula that include lessons on business management, financial management, and marketing strategies. Schools can also organize business incubation programs, startup competitions, and workshops featuring successful entrepreneurs as guest speakers to provide inspiration and practical knowledge. Establishing entrepreneurship clubs or communities within schools also provides

students with opportunities to collaborate, share ideas, and support each other in pursuing their business projects. All these elements create a conducive ecosystem for students to develop and implement their business ideas.

The Competency Dimension

Relevant and practical skills can significantly enhance entrepreneurial intentions among students by providing them with confidence and tangible abilities to initiate and manage businesses. Therefore, various educational programs focusing on developing entrepreneurial skills, such as management, leadership, problem-solving, and creativity, are crucial. Based on a systematic literature review, skill dimensions that support the cultivation of entrepreneurial intentions among students include entrepreneurial capacity (Q. D. Nguyen & Nguyen, 2023), emotional competency (Velástegui & Chacón, 2021), in personal capacity (Arranz et al., 2019), management capacity (Arranz et al., 2019), entrepreneurial skill (Pouratashi, 2015), entrepreneurial knowledge (Wibowo, Narmaditya, Saptono, et al., 2023), and economic literacy (Suratno et al., 2021).

According to Q. D. Nguyen and Nguyen (2023), entrepreneurial capacity serves as a mediator in the relationship between entrepreneurship education and entrepreneurial intentions. Entrepreneurial capacity plays a crucial role in fostering entrepreneurial intentions among students as it encompasses the knowledge, skills, and attitudes needed to start and run businesses. This includes understanding

business management, market analysis skills, effective communication skills, and the ability to identify and exploit business opportunities. Strong entrepreneurial capacity also encourages students to be more innovative and creative in devising business solutions that add value to society. Schools should design suitable education programs and curricula to nurture and develop students' entrepreneurial capacity, preparing them for entrepreneurial intentions.

Another essential skill is emotional competency, which is vital for supporting the cultivation of entrepreneurial intentions among students. Emotional competency includes skills in emotional management, resilience, empathy, and adaptability to change. For instance, Velástegui and Chacón (2021) note that emotional competence is a significant factor in configuring students' entrepreneurial intentions and has a direct and positive relationship with cognitive antecedents such as entrepreneurial attitudes and self-efficacy. Emotional competency helps students overcome cognitive biases that can hinder recognizing business opportunities, overconfidence, and misplaced control (Padilla-Meléndez et al., 2014). It also helps students build strong interpersonal relationships, which are essential for establishing business networks and collaborations.

A study by Arranz et al. (2019) states that management skills and personal capacity play crucial roles in enhancing students' entrepreneurial intentions through school educational programs. Management skills, which include planning, organizing,

controlling, and leadership, provide students with practical skills necessary for effective business management. Meanwhile, personal capacity, which involves self-development, self-confidence, and perseverance, helps students become resilient and adaptive individuals. Entrepreneurship education that integrates management training and personal capacity development through various learning activities equips students with the necessary knowledge and skills to succeed. In this context, students gain theoretical insights and practical experience that strengthens their intentions to become entrepreneurs, feeling more prepared and confident in starting and managing their businesses. Therefore, educational institutions should consider mastering these competencies in curriculum development and learning in schools to better prepare students for the evolving demands of the modern workforce, ensuring they thrive in their future careers and contribute positively to a dynamic professional environment.

Entrepreneurship education plays a crucial role in shaping entrepreneurial intentions among students by providing them with the knowledge and skills necessary to start and manage a business. In addition, environmental support, such as from family, school, and community, is also very important in providing the motivation and resources needed to explore the world of entrepreneurship. Personal factors, including students' attitudes, beliefs, and personalities, also significantly shape entrepreneurial intentions. For example, a confident and resilient student is more likely to take risks

and persist in the face of challenges. Lastly, relevant competencies, such as identifying market opportunities, negotiation skills, and financial management, must be continuously developed through the entrepreneurship education curriculum. Strengthening all these aspects can strengthen students' entrepreneurial intentions, paving the way for them to become innovative and successful business leaders in the future.

CONCLUSION

This study identifies and analyzes how entrepreneurial education interacts with other antecedent factors to influence students' entrepreneurial intentions. The findings indicate that the influence of entrepreneurial education on students' entrepreneurial intentions is supported by other factors, such as personal dimensions, environmental support, and skills. Moreover, this study reveals a rising trend in research on the role of entrepreneurial education in enhancing entrepreneurial intentions from 2012 to 2023. Finally, several papers included in this review reinforce the relationship between entrepreneurial education, personal dimensions, environmental support, skills, and entrepreneurial intentions. The formation of entrepreneurial intentions among students is influenced by a complex interplay of entrepreneurship education, environmental support, personal characteristics, and competence development.

In conclusion, the proposed contribution theory posits that students' entrepreneurial intention formation is a complex interplay of entrepreneurship education, environmental

support, personal factors, and competencies, all of which are interlinked through the frameworks of the EEM and TPB. These theories underscore the importance of a holistic approach to fostering entrepreneurial intentions among students, highlighting the need for integrated educational programs that impart knowledge, build competencies, and provide supportive environments. The study's findings assist scholars in future research to explore and understand antecedent factors that can strengthen students' entrepreneurial intentions. Also, future research should continue to explore these relationships to develop more effective educational programs and support systems that foster entrepreneurial intentions. The limitations of this study are influenced by the use of source platforms that only use two online catalogs. In fact, many other platforms can be studied, and different findings can be reported within the context of this study. Thus, future research should consider other online platforms for conducting SLR studies on entrepreneurial intentions.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to all individuals and institutions who have contributed to the completion of this study. Special appreciation is extended to Politeknik Negeri Balikpapan and Universitas Negeri Yogyakarta for providing access to research facilities and databases that were essential for conducting the systematic literature review. We are grateful to the authors and researchers whose studies were reviewed in this paper,

as their work formed the foundation of our analysis and discussion.

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Vietnamese University Students' Research Anxiety and Perceptions of Supervisor Support: A Mixed-Methods Study

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ABSTRACT

This study examined differences in research anxiety levels among undergraduate students as well as the correlation between research anxiety and perceived supervisor support. The study employed an explanatory mixed-methods design, with quantitative data collected and analysed first, followed by qualitative data to help interpret the quantitative results. Three hundred and ninety undergraduates completed online questionnaire surveys, and 20 participated in focus group discussions. T-tests, ANOVA, and Pearson correlation were used for the statistical analysis. Thematic analysis was employed to analyse the qualitative data. Findings showed that females exhibited higher anxiety levels than males. Juniors exhibited the highest anxiety, while freshmen showed the lowest. Business and Management students reported the highest anxiety levels, whereas Technology and Engineering students had the lowest. A weak, positive relationship between anxiety and perceived support was identified, with qualitative data offering further insights into individual experiences and perceptions. Guidance in research, knowledge, skills, and emotional support generally reduced anxiety. However, seniors and juniors experienced increased anxiety due to perceived gaps between the support they received and their expectations. The combination of quantitative and qualitative data in this study

provided a more comprehensive understanding of how supervisor support impacted research anxiety. The study suggests strategies for reducing anxiety levels among undergraduates and provides directions for future research.

ARTICLE INFO

Article history:

Received: 24 September 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.08>

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Keywords: Mixed-methods design, research anxiety, supervisor support, undergraduates, Vietnam

INTRODUCTION

Improving undergraduate research (UR) is essential for enhancing undergraduates' awareness of the research process at higher education levels, fostering collaboration and research networks (Q. V. Pham et al., 2018), and developing lifelong learning skills (Hill et al., 2022). Unsuccessful UR experiences among undergraduates can lead to problematic issues such as a lack of preparedness for advanced research roles and reduced engagement with academic disciplines (Cooper et al., 2023). This, in turn, can ultimately affect students' career prospects and hinder their ability to contribute meaningfully to their fields. Therefore, in Asian countries such as Vietnam, universities are striving to encourage student participation in UR activities through various measures, such as establishing laboratories, centres or excellent research teams and organizing annual UR programs, competitions, seminars, and conferences (Le & Hoang, 2021), especially in technology and natural science fields (H. H. Pham & Bui, 2023). Despite these efforts, research resources and funding are often limited (Q. V. Pham et al., 2018). In Vietnam, undergraduates are required to complete a graduation thesis as a capstone project, which is considered a key UR activity. Within the scope of this paper, undertaking a UR activity by students is understood as completing a graduation thesis, participating in a project, or taking courses on research methods.

Conducting a research activity is considered a complex and challenging

task, requiring various skills and qualities such as critical thinking, communication skills, problem-solving, scientific writing techniques, and argumentation skills (van Blankenstein et al., 2019). It is also a valuable learning experience, demanding commitment, curiosity, and patience from researchers (Quan & Elby, 2016). Therefore, lacking research experience, motivation, and exposure to research methods may negatively affect university students' attitudes and beliefs about research and research knowledge. Some scholars, such as Rezaei and Zamani-Miandashti (2013), posit that a significant number of students experience high levels of anxiety throughout the research process. High levels of anxiety can lead to burnout, wasting resources such as time, energy, and effort, and sometimes causing students to drop out of the research process (Angaiz et al., 2021). Students who perceive research as difficult and challenging often experience higher levels of anxiety than their peers (Ogvan et al., 2014). Fear and anxiety are considered the main reasons why some students cannot complete research tasks. Although the relationship between UR anxiety and supervisor support remains unexplored (Cooper et al., 2023; Maharajan et al., 2017), studies examining the correlation between supervisor support and the mental health (stress and/or depression) of research students (Friedrich et al., 2023; Wollast et al., 2023) suggest that they are inversely related. When receiving high levels of support, the level of stress/depression decreases, and vice versa.

Currently, there are still relatively few studies focusing on the research anxiety of undergraduate students, the influencing factors, and the relationship between anxiety in UR and other factors (Maharajan et al., 2017; Sawitri & Creed, 2021). Razali et al. (2020) argued that there is a significantly lower number of studies related to supervisor support in undergraduate research compared to the postgraduate level. In the current Vietnamese literature, various issues surrounding the topic of undergraduate research have been addressed, such as students' self-assessment of research abilities (Le & Hoang, 2021), strategies to develop students' research capacity (H. H. Pham & Bui, 2023), research motivation (Q. V. Pham et al., 2018), or the role of supervisors during the research process (Tran et al., 2022). However, there appears to be a lack of studies investigating research anxiety or the impact of supervisors' support on students' research anxiety within the Vietnamese context. This absence of research has limited knowledge on the topic, making it challenging to develop effective interventions or resources to reduce research anxiety.

While most existing research focuses on postgraduate students, undergraduates may experience different research stressors and strains (Fatima & Malik, 2019). A significant number of studies are quantitative, offering insights into the levels of perceived support. However, less is known about the specific experiences that shape how support is perceived. Therefore, research that incorporates qualitative data is necessary

to illuminate this issue. The study makes the following contributions to the existing literature. First, we focus on Vietnamese undergraduates, an under-researched population, as respondents and compare anxiety levels across various demographic variables. Second, we investigate the correlation between anxiety and perceived supervisor support. We expect the qualitative data to offer insights into this relationship, which has been largely unexplored in the existing literature. This study aims to provide valuable insights into strategies for enhancing the UR experience. Specifically, the findings can guide improvements in supervisory practices, contributing to a more supportive research environment and ultimately reducing research anxiety among undergraduates.

LITERATURE REVIEW

Anxiety and Research Anxiety

Anxiety is recognised as a psychological condition marked by unpleasant emotions (e.g., unease) about potential future adversities (Saviola et al., 2020). Symptoms associated with anxiety can manifest as avoidance behaviours (such as withdrawing socially or avoiding tasks), physical responses (like headaches or stomach aches), or physiological arousal (such as sweating or rapid breathing; Fishstrom et al., 2022). Anxiety is categorized into two main types: "state anxiety," which refers to a temporary reaction to negative events, and "trait anxiety," which represents a stable personality trait characterized by a consistent tendency to react with worries, concerns,

and troubles in various situations (Endler & Kocovski, 2001; Spielberger, 2013). In scholarly research, it is widely shown that minor levels of anxiety can enhance students' performance by improving their focus and concentration. Conversely, elevated levels of anxiety have been linked to multiple negative consequences within academic settings (Lader & Marks, 2013; Lyndon et al., 2017). Research anxiety refers to the state or condition of discomfort experienced by students while conducting research (Maschi et al., 2012).

In this paper, research anxiety is considered a type of anxiety that occurs while undergraduates are doing a research task, such as completing a graduation project, participating in a research project, or taking a course on research methods. Cooper et al. (2023) classified research anxiety as a specific type of state anxiety. It is described as dynamic rather than fixed (Maschi et al., 2012). It is triggered by the act of engaging in different research activities, such as conducting experiments, writing papers, or presenting findings. Research anxiety acts as a filtering mechanism and significantly influences the research process and academic achievements of students (Maharajan et al., 2017).

Studies on Undergraduates' Research Anxiety

Currently, the number of research studies on research anxiety is not extensive (Angaiz et al., 2021), particularly when it comes to works targeting undergraduate students as informants (Mensah et al., 2023), despite

anxiety in the learning environment being a highly regarded topic in various contexts. Among the published works concerning UR anxiety, scholars draw different conclusions, likely attributable to the dynamic nature of anxiety (Cooper et al., 2023).

Researchers have measured the research anxiety levels of undergraduates and investigated whether these levels differ across demographic variables. Some scholars (e.g., Adaboh et al., 2017; Maharajan et al., 2017; Natividad et al., 2019) state that undergraduate students experience high levels of research anxiety. However, in the study by Dönger et al. (2017), undergraduates reported relatively low levels of anxiety. Scholars also hold differing views on the anxiety levels among study groups from various departments. For instance, while Dönger et al. (2017) argued for differences in anxiety levels among students from different departments, Adaboh et al. (2017) denied this claim. Most authors state that there is no difference in anxiety levels between male and female students (Dönger et al., 2017; Natividad et al., 2019; Oguan et al., 2014). For example, Dönger et al. (2017) conducted a quantitative study to measure the research anxiety levels of 168 teacher education students (104 female, 57 male) from 4 learning areas in Turkey.

The results showed that the students had low anxiety levels. Anxiety levels did not differ between male and female students; however, variations were observed among students from different departments. Art education students showed the lowest anxiety level compared to other groups.

Similarly, Adaboh et al. (2017) conducted a descriptive statistical study to understand the anxiety levels in scientific research among 93 healthcare students and 35 education students at a university in Ghana. The results showed no difference in anxiety levels between the two majors. Both groups experienced moderate levels of anxiety during the research process. Regarding year of study, although there has been no research investigating this issue among undergraduates, similar studies suggest that anxiety decreases progressively with each advancing year of study (Beiter et al., 2015; Lomotey, 2021).

Beyond demographic factors, scholars have also examined other variables related to UR anxiety, such as research intent, research attitude, academic effort, and research self-efficacy, revealing interesting insights. For example, a study conducted with U.S. undergraduates by Cooper et al. (2023) found that research anxiety was negatively related to the intention to pursue a research-related career. Qualitative data from the study highlighted that the factors increasing research anxiety included unsuccessful research experiences, lack of research preparation, perceived insufficient guidance, and difficulty balancing commitments. Conversely, factors that decreased research anxiety included a positive laboratory environment, strong relationships with mentors, and a perception of sufficient guidance. Mensah et al. (2023) found that research anxiety was negatively related to research self-efficacy and perceived research usefulness among technical undergraduates

in Ghana. No relationship was found between academic effort and research anxiety in this study. Maharajan et al. (2017), in their investigation of factors influencing research anxiety among pharmacy seniors in Malaysia, found that research anxiety was negatively correlated with academic effort and research self-efficacy. However, no relationship was found between research attitude and research anxiety in their study. Natividad et al. (2019) found no relationship between research anxiety and research self-efficacy among third-year students in the Philippines.

While researchers have explored the relationship between various factors and UR anxiety, a search on ScienceDirect, Scopus, ProQuest, and Google Scholar revealed a significant gap in the literature: no studies have examined the connection between UR anxiety and supervisor support. Given the crucial role that supervisors play in the undergraduate research process, as discussed in the following section, it is essential to investigate this relationship in relevant studies to better understand how supervisor support might influence UR anxiety and contribute to more effective interventions.

Supervisor Support and Research Anxiety

The support provided by the supervisor is defined by Ahmed et al. (2017) as the assistance and guidance that students receive from their assigned supervisor. According to Han et al. (2022), in research, the supervisor is the primary provider of support to students

in terms of intellect, helping to minimise risks in the orientation and execution of research. This support can be direct or indirect, assisting students in various tasks such as topic selection, research planning, data processing, and report writing. Overall et al. (2011) emphasised that in addition to academic support, such as teaching necessary research skills or assisting with research design, supervisors need to provide personal support, specifically psychological support, to help students overcome any difficulties they encounter during the research process. Moreover, supervisors need to help students develop autonomy in research by encouraging them to make decisions, providing opportunities for them to express their opinions, and gradually building their independent research skills. Supervisors have a significant impact on the process, quality, and outcomes of research training, including students' creative behaviours in research (Tierney & Lanford, 2016). This is particularly true in the higher education environment in Vietnam, where undergraduate students typically have only one supervisor who is primarily responsible for guiding them through their research tasks.

It is recognised in the literature that research anxiety is considered common among undergraduates (Rezaei & Zamani-Miandashti , 2013). The role of supervisors in developing students' knowledge, emotions, and professionalism in scientific research is indispensable (Doğan & Bıkmaz, 2015). A UR student, when carrying out a research task, requires support from their

supervisor in many aspects to overcome challenges encountered during the research process. However, the relationship between research anxiety and supervisor support has not been the focus of many studies yet. We are aware of two studies using postgraduates as informants, which indicated the inverse relationship between research anxiety and supervisor support. Ma et al. (2024) investigated the relationship between supervisor support, research self-efficacy, and postgraduate anxiety in three eastern provinces of China. The authors utilised a survey method with a sample of 1,095 students (518 males, 577 females, 74% postgraduates, and 26% doctoral students) from various disciplines. The researchers discovered that instrumental support (such as resources, knowledge, and funds) and emotional encouragement from supervisors were positively associated with graduate students' scientific research self-efficacy, while being negatively correlated with their levels of anxiety. Similarly, a survey carried out in China by Liu et al. (2019) involved 325 doctoral students (60.3% male, 39.7% female) at a medical university to evaluate levels of depression and anxiety. About 23.7% of the participants exhibited symptoms of depression, while 20.0% displayed signs of anxiety. The mentorship connection was found to have a positive correlation with research self-confidence and a negative correlation with student stress and anxiety.

In literature, studies (e.g., Friedrich et al., 2023; Wollast et al., 2023) consistently indicate an inverse relationship between

supervisor support and the mental health challenges encountered by postgraduate research students. High levels of perceived supervisor support or satisfaction with advisory relationships are linked to reduced depressive symptoms among these students. For instance, Fatima and Malik (2019) found that supervisor support significantly predicted lower levels of stress and depression, underscoring its critical role in safeguarding students' mental well-being. Levecque et al. (2017) reported that inadequate support and feedback were strongly associated with an increased risk of mental health issues, including anxiety, strain, unhappiness, and depression among doctoral students. The alignment between supervisor support and student expectations also emerges as a crucial factor in students' mental health outcomes. Anttila et al. (2024) suggested that the origins of students' anxiety and depression may lie in the nature and delivery of support provided by supervisors. A mismatch between supervisors' expectations and students' capabilities can lead to significant disappointment, particularly on the part of the students (Devos et al., 2016; Parker-Jenkins, 2016). Additionally, Pyhältö et al. (2015) highlighted that the high-performance demands imposed by supervisors can contribute to substantial psychological costs for doctoral students.

Given the limited research on undergraduate research (UR) anxiety, especially the dearth of research on the relationship between research anxiety and supervisor support, this mixed methods

study aims to address these gaps by comparing anxiety levels among students across various demographic variables and examining how students' perceptions of supervisor support impacts research anxiety among undergraduates in Vietnam. Understanding these issues will facilitate both the development of effective interventions and resources to help students cope with anxiety, as well as the design of supervisor support strategies aligned with students' needs. Additionally, research anxiety and its contributing factors vary significantly by cultural and educational context (Cooper et al., 2023). Therefore, conducting a study in Vietnam—an under-researched context—is especially important.

Bronfenbrenner's ecological systems theory (2005) explains how various environmental factors interact at different levels to influence an individual's development. In the context of anxiety, the theory helps us understand how demographic factors like gender, year of study, and field of study, as well as the support provided by a supervisor, can create complex layers of influence that contribute to a person's anxiety levels. In addition, the buffering hypothesis (Cohen & McKay, 1984) suggested that supervisor support (a form of social support) can plausibly help individuals cope with stress and challenges in academic or work settings. However, social support can have negative effects if there is an overreliance on support or if support is perceived as inadequate, unhelpful, or creates pressure. In this study, we expect that Vietnamese undergraduates will differ significantly

in anxiety levels regarding demographic variables (independent variables), as research anxiety is situational and dynamic (Cooper et al., 2023; Maschi et al., 2012). We also anticipate an inverse relationship between supervisor support (independent variable) and research anxiety (dependent variable), as previous studies suggest a negative correlation between supervisor support and the mental health of research students (Friedrich et al., 2023; Wollast et al., 2023). Our hypotheses are as follows:

H₁: There are significant differences in research anxiety levels based on gender.

H₂: There are significant differences in research anxiety levels based on the field of study.

H₃: There are significant differences in research anxiety levels based on year of study.

H₄: There is a significant inverse relationship between perceived supervisor support and research anxiety.

METHODS

This study utilised an explanatory mixed-method design to gain a deeper insight into students' perspectives on research anxiety and supervisor support, as described by Creswell and Creswell (2017). Employing a mixed-methods design enabled the researchers to overcome the constraints of relying solely on one method and enhance the depth and significance of the analysis. Quantitative statistical data were collected in the initial phase to measure students'

anxiety levels and examine the correlation between anxiety and support. Subsequently, focus group discussions were employed to gain insights into the relationship between research anxiety and supervisor support, as it was identified as a core theme warranting detailed investigation.

Participants

Survey Participants

This study collected data from 390 undergraduates at a university in Vietnam. A convenience sampling method was employed to select survey participants, where participants were selected based on their availability and willingness to participate. Among the participants, males comprised 73% (n = 284) while females constituted 27% (n = 106) of the sample. Regarding year of study, freshmen accounted for 25% (n = 97), followed by sophomores at 29% (n = 112), juniors at 28% (n = 107), and seniors at 19% (n = 74). The students in Social Sciences (Law, Education, and Foreign Languages) comprised 10.5% (n = 41), Technology and Engineering (Electrical Engineering Technology, Automotive Engineering Technology, Heat and Refrigeration Engineering, and Electronics Technology) accounted for 74.5% (n = 291). Business and Management (Accounting, Finance & Banking, and Business Administration) represented 15% (n = 58) of the participants.

Focus Group Participants

The study employed a convenience sampling method to select participants

for the focus group discussions. Although 28 students initially agreed to participate, only 20 students (12 males and eight females) ultimately joined due to scheduling conflicts, with five participants per group. In terms of year of study, freshmen comprised 25% (n = 5), sophomores 20% (n = 4), juniors 25% (n = 5), and seniors 30% (n = 6). Regarding academic fields, the Social Sciences accounted for 20% (n = 4), Technology and Engineering for 60% (n = 12), and Business and Management for 20% (n = 4). Students were grouped based on their available schedules.

Instruments

The Questionnaire

The questionnaire consisted of three sections. In section 1, we collected students' demographic information, including gender, year of study, and field of study. Previous studies have indicated that these factors predict students' anxiety levels (Adaboh et al., 2017; Maharajan et al., 2017; Natividad et al., 2019). Additionally, guided by Bronfenbrenner's theory, we used students' demographic information along with perceived supervisor support as independent variables to capture the multi-layered environmental influences on anxiety. To develop the perceived supervisor support scale (section 2), we reviewed the literature and consulted with experienced teachers and scholars. The scale's content validity was then evaluated by three experts, ensuring relevance and clarity of the items. The original scale comprised 10 items. Following these consultations, one item

was reworded for clarity and precision. The statement "My supervisor provides me with constructive feedback" was revised to "My supervisor's feedback is constructive." This adjustment aimed to enhance the item's straightforwardness and make the statement clearer for assessing the supervisor's effectiveness. Additionally, a new item was added: "My supervisor creates opportunities to encourage my critical thinking." This modification ensured that the scale not only reflects the supervisor's role in providing feedback but also captures their involvement in promoting students' independent thinking. The final scale consisted of 11 items, which required students to rate the academic and emotional support provided by their supervisors. It employed a five-point Likert scale (1 = strongly disagree, 5 = strongly agree) and demonstrated high reliability, with a Cronbach's alpha of 0.938. A higher score indicates a higher level of perceived support.

To measure the dependent variable (section 3), students' research anxiety, we employed a 10-item scale developed by Maharajan et al. (2017), which had a Cronbach's alpha of 0.74. Examples of the items included: "I feel out of sorts or not really myself when I undertake any research-related tasks," and "During data analysis, I think that I am doing awful or that I may fail." Each item was measured on a 5-point Likert scale, with a score of 1 indicating 'strongly disagree' and five indicating 'strongly agree.' Higher scores suggest higher levels of research anxiety. In the present study, Cronbach's alpha for the

10-item scale was 0.878, indicating strong internal consistency.

The questionnaire was translated into Vietnamese to ensure a consistent understanding of the question items. The back-translation technique, conducted by the first and third authors, along with a Vietnamese expert, ensured the fidelity and accuracy of the translation. A trial with a small sample of 30 students was conducted to address technical difficulties and ambiguities in meaning. No adjustments were needed, as the students did not encounter any issues with the questionnaire. As a result, the questionnaire was finalised without modification and distributed to the participants.

Focus Group Discussion

Four discussions, each lasting 45 minutes, were conducted at a café near the university, which was convenient for all participants, and were audio recorded. The first researcher utilised a semi-structured set of questions to interview the students in their native language. Sample questions included: “In what ways can supervisors assist students in conducting research?” and “Do you think your supervisor can help alleviate your research anxiety? Please explain.”

Data Collection

The researchers utilised Raosoft software to determine the required number of survey participants, which resulted in a necessary sample size of 377. This calculation assumed a response distribution of 50%, with a 95% confidence interval and a 5% margin of error.

Initially, the researchers secured approval from the faculty’s research ethics committee (GXN No. 1/2023-KHCB-ĐĐNC) before initiating the informed consent process. An invitation email, containing an introductory screening question, ‘Have you had any research experiences?’ was sent to 700 undergraduates in late October 2023. The email clearly stated that participation in the study was optional, would not impact academic performance and advancement, and ensured full anonymity. To mitigate sampling bias (Creswell & Creswell, 2017), the researchers opted to include students who had previously engaged in or were currently doing research activities such as conducting undergraduate research, attending research method courses, or joining projects. Only students who responded ‘Yes’ to the screening question proceeded to the online questionnaire. After three weeks, the study received 459 responses, of which 390 were considered valid and included in the current research, yielding an efficiency rate of 85%.

Students who expressed interest in participating in the focus group discussions provided their contact information in the questionnaire. A total of 20 students participated in the discussions, organised into four groups of five students each. This grouping allowed us to facilitate focused, high-quality discussions while adhering to practical constraints. The focus group discussions were scheduled a week after the questionnaire distribution and were conducted in the final week of November 2023.

Data Analysis

Quantitative data were analysed using SPSS 25.0 for Windows. First, the normality of the data was assessed using the Skewness test. The skewness tolerance values were 1.3 for anxiety data and 0.9 for support data, which are less than the critical values of ± 1.96 at a 0.05 significance level. As the test indicated a normal distribution of the data, descriptive analysis, t-tests, and ANOVA were subsequently conducted to evaluate potential differences in students' levels of research anxiety across various demographic variables. To explore the relationship between anxiety and support, Pearson's correlation was employed.

We used the thematic analysis technique (Braun & Clark, 2006) to understand data from focus groups. The process began with the first researcher reading and re-reading the transcripts of the focus group data. During the second step, the first researcher identified text segments deemed relevant as codes, focusing on the impact of supervisor support on students' research anxiety. In the third step, these initial codes were systematically applied across the entire dataset, with the first researcher manually highlighting the corresponding sections of text. In the fourth step, similar codes were grouped into categories, forming preliminary themes. In the fifth step, the first researcher thoroughly reviewed and refined the content within each category to redefine these themes. Three themes emerged from the analysis: enrichment of knowledge and skills, emotional support, and discrepancies in expectations. In the last step, the themes were contextualised within the research

question and supported with illustrative quotes from the focus group data.

To enhance transparency in the review process, the second and third researchers conducted thorough and independent evaluations of each theme, providing specific contributions to validate and refine the thematic analysis. They cross-checked the themes by reviewing supporting data examples and verifying that each data excerpt accurately fitted its category. Having the second and third researchers independently review the themes reduced individual bias and improved the credibility of the findings. As researchers and lecturers, we reflected on our own potential biases, assumptions, and roles in the research process. By being mindful of how our perspectives might influence interpretations, we strengthened the confirmability of the findings, demonstrating that conclusions were grounded in data rather than personal views.

RESULTS

Differences in Anxiety Levels with Respect to Demographic Variables

Gender

As can be seen in Table 1, females tended to have higher anxiety levels ($M = 3.30$, $SD = 0.769$) compared to their male counterparts ($M = 3.05$, $SD = 0.729$). There is a significant difference in anxiety levels between the two groups of students ($p = 0.003 < 0.5$). The effect size was small to moderate (Cohen's $d = 0.334$). Therefore, H_1 was supported.

Table 1
Results of the independent samples test with respect to gender

Variable	Male (N=284)		Female (N=106)		t	df	p-value (Levene Test)	p-value (2-tailed)	95% CI of the Difference	Cohen's d
	Mean	SD	Mean	SD						
Anxiety	3.05	0.729	3.30	0.769	-3.023	388	0.170	0.003	-0.421 to -0.089	0.334

Table 2
Results of the one-way ANOVA test regarding the field of study

	Field of study	N	Mean	SD	F	df1	df2	Levene's Test Statistic	p-value (Levene Test)	p-value (ANOVA)
Anxiety	Social Sciences	41	3.31	0.750	17.98	2	387	0.494	0.611	0.000
	Technology & Engineering	291	3.00	0.720						
	Business & Management	58	3.59	0.679						
	Total	390	3.12	0.748						

Table 3
Results of the Bonferroni post-hoc test

(I) Field of study	(J) Field of study	Mean Difference (I-J)	SE	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Social Sciences	Technology and Engineering	0.31488*	0.119	0.027	0.027	0.603
	Business and Management	-0.27434	0.146	0.185	-0.626	0.078
Technology and Engineering	Social Sciences	-0.31488*	0.119	0.027	-0.603	-0.027
	Business and Management	-0.58922*	0.103	0.000	-0.837	-0.341
Business and Management	Social Sciences	0.27434	0.146	0.185	-0.078	0.626
	Technology and Engineering	0.58922*	0.103	0.000	0.341	0.837

Note. *=The mean difference is significant at the 0.05 level

Field of Study

The results of a One-way ANOVA test in Table 2 show that participants differed significantly in anxiety levels related to their field of study ($F(2, 387) = 17.98, p = 0.00$). Levene's test confirmed the assumption of homogeneity of variances ($F(2, 387) = 0.494, p = 0.611$). Students

in the Business and Management group displayed the highest anxiety level ($M = 3.59, SD = 0.679$), while those in the Technology and Engineering group reported the lowest level ($M = 3.0, SD = 0.72$). The results of a Bonferroni post-hoc test revealed significant differences between students in the Technology and Engineering group

Table 4
Results of the one-way ANOVA test regarding the year of study

	Year of study	N	Mean	SD	F	df1	df2	Levene's Test Statistic	p-value (Levene Test)	p-value (ANOVA)
Anxiety	Freshmen	97	2.81	0.676	13.48	3	386	0.669	0.571	0.000
	Sophomore	112	3.02	0.709						
	Junior	107	3.41	0.720						
	Senior	74	3.23	0.761						
	Total	390	3.11	0.748						

Table 5
Results of the Bonferroni post-hoc test

(I) Year of study	(J) Year of study	Mean Difference (I-J)	SE	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Freshmen	Sophomore	-0.21845	0.099	0.169	-0.481	0.044
	Junior	-0.60766*	0.100	0.000	-0.873	-0.342
	Senior	-0.42085*	0.110	0.001	-0.713	-0.128
Sophomore	Freshmen	0.21845	0.099	0.169	-0.044	0.481
	Junior	-0.38921*	0.096	0.000	-0.645	-0.133
	Senior	-0.20240	0.107	0.356	-0.486	0.082
Junior	Freshmen	0.60766*	0.100	0.000	0.342	0.873
	Sophomore	0.38921*	0.096	0.000	0.133	0.645
	Senior	0.18681	0.108	0.508	-0.099	0.473
Senior	Freshmen	0.42085*	0.110	0.001	0.128	0.713
	Sophomore	0.20240	0.107	0.356	-0.082	0.486
	Junior	-0.18681	0.108	0.508	-0.473	0.099

Note. *= The mean difference is significant at the 0.05 level

and those in Business and Management ($p = 0.00$), as well as between Technology and Engineering and Social Sciences ($p = 0.027$) (see Table 3). Therefore, H_2 was supported.

Year of Study

The results of a One-way ANOVA test in Table 4 show a significant difference in anxiety levels between different groups of students, as related to their year of study ($F(3, 386) = 13.48, p = 0.00$). Levene's test confirmed the assumption of homogeneity

of variances ($F(3, 386) = 0.669, p = 0.571$). Juniors tended to have the highest anxiety levels ($M = 3.41; SD = 0.72$), followed by seniors ($M = 3.23, SD = 0.761$). Freshmen were the least anxious students ($M = 2.81, SD = 0.676$). A Bonferroni post-hoc test was then conducted. The test indicated significant differences between the freshmen and senior groups ($p = 0.001$), freshmen and junior groups ($p = 0.000$), as well as sophomore and junior groups ($p = 0.000$; see Table 5). Therefore, H_3 was supported.

Table 6
Correlation analysis between anxiety and support

		Anxiety	Support
Anxiety	Pearson Correlation	1	0.181**
	Sig. (2-tailed)		0.000
	N	390	390
Support	Pearson Correlation	0.181**	1
	Sig. (2-tailed)	0.000	
	N	390	390

The Correlation Between Research Anxiety and Perception of Supervisor Support

In Table 6, a positive correlation was found between anxiety and support at the 0.01 level (2-tailed) (sig = 0.000). However, the correlation was weak ($r(390) = 0.181$). To some extent, as levels of support increased, levels of anxiety tended to increase slightly as well. Therefore, H_4 was not supported.

Qualitative Data

There was evidence that students’ anxiety was influenced by the supervision they received. When describing how supervisors could assist them in conducting research and reducing anxiety, students emphasised the importance of supervisors in providing research guidance, skill development, and emotional support. However, seniors and juniors experienced increased anxiety levels due to perceived discrepancies between the support they received in certain areas and their expectations.

Enrichment of Knowledge and Skills

In the discussions, all students reported experiencing negative emotions owing to a perceived deficiency in research knowledge

and skills at some stage during the research process. Guidance from supervisors in acquiring the necessary knowledge and skills assisted many students in addressing the research tasks.

Emotional Impacts of Research Knowledge Deficits

All interviewed students expressed feelings of confusion, stress, and a lack of confidence when performing specific research tasks at various stages of the research process, which they attributed to their perceived lack of research knowledge and skills.

I was stressed about why a certain data test did not work. I tried everything I had learned from the textbook, but could not seem to figure out what might have gone wrong. (ST1-FG3)

At the outset of my undergraduate thesis, I struggled with scientific writing for about a month. (ST3-FG1)

I felt overwhelmed because I did not know how to start coding my data. I looked for help from my peers, but it seemed that they faced the same challenge. (ST2-FG4)

Writing the literature review was a daunting task. It was stressful to know how to write an outline. (ST2-FG3)

Growth in Research Knowledge and Skills

Many students valued the support they received from supervisors in enriching their research knowledge and skills. One student described how her supervisor's timely instruction in data analysis skills improved her confidence in handling statistical software.

I contacted my supervisor, and she promptly organised an online meeting to teach me and my group members how to conduct various data tests using the SPSS program. I felt relieved! The new skills I gained not only helped me analyse my research data more effectively but also boosted my confidence in handling the software. (ST1-FG3)

Another student noted the improvement in his scientific writing skills because of his supervisor's guidance.

My supervisor carefully checked my writing every fortnight, highlighting areas for improvement in her feedback. This guidance aided in honing my writing skills. I felt grateful and indebted to her. (ST3-FG1)

Similarly, a student observed an increase in her understanding of research ethics protocols and her research confidence,

which she attributed to her supervisor's instruction.

My supervisor noticed our struggles and took the time to explain the foundational concepts step by step. She provided real-life examples of how she and other researchers navigated similar challenges. This timely support not only deepened my understanding of research ethics protocols but also restored my confidence in tackling the tasks. (ST5-FG4)

Emotional Support

Supervisors' sympathy and implementation of anxiety-reduced strategies proved to be successful in fostering positive emotions and alleviating the anxiety levels of many students throughout the research process.

Supervisors' Empathy and Encouragement

Students' negative emotions were mitigated by supervisors' understanding of their frustrations, encouragement, and acknowledgement of their efforts. As a result, they felt supported, valued and more confident in their abilities.

I struggled with the literature review section in my previous research methods course. I deeply appreciated the warmth and understanding shown by my supervisor. She repeatedly reassured me that having this challenge was normal and that I was doing just fine. Her discussion helped reduce my

worries and instilled confidence in me.
(ST2-FG4)

My supervisor consistently expressed understanding and empathy when I faced difficulties and felt pressured. She attentively listened and responded to any concerns I had. She frequently complimented me and made me feel good about myself and my work. (ST1-FG4)

Anxiety-Reduction Techniques

Supervisors' efforts to implement certain strategies also contributed to reducing students' anxiety. One student recalled feeling comfortable expressing his research frustrations and uncertainties due to his supervisor's organisation of group meetings, which effectively addressed his needs and alleviated his anxiety.

My supervisor organised a monthly group meeting in which my research group members discussed fears or research problems openly. I did not feel stupid for asking questions. We listened to each other's problems, shared advice, and learned from our peers and the supervisor. We felt much better, and our research confidence improved after each meeting. (ST5-FG2)

Another student noted that her supervisor adjusted tasks and set realistic deadlines based on the students' abilities, which gradually reduced anxiety for her and her classmates while building their confidence.

When we felt overwhelmed by the workload, my supervisor discussed breaking tasks into smaller parts and setting realistic deadlines with us. This change in approach reduced our worries about falling behind and motivated us to concentrate more on completing our tasks. (ST2-FG4)

Expectation Discrepancies

It seemed that there were discrepancies between the support provided by supervisors and the expectations of certain students, who were either seniors or juniors. Some supervisors expected quality outcomes and independent work, along with providing support and guidance in these areas. Meanwhile, the students grappled with the daunting task of meeting these expectations amidst the complexities of their research activities. The expectation discrepancies fuelled pressure and self-doubt, leading the students to question their competence, and ultimately resulting in heightened anxiety about their research abilities.

Emotional Impacts of Independent Work

In the following example, the supervisor's support for independent work contributed to a senior student feeling lost and uncertain about how to proceed with his work, since he hoped for clear guidelines and explanations.

My supervisor consistently encouraged us to work autonomously or make independent decisions. She enthusiastically provided me with reading materials at different

stages of my project. However, many important concepts remained unclear to me without her explanations. I often found myself stuck and confused when encountering vague issues. I felt hesitant to ask my supervisor for clarification, fearing I might appear incompetent. (ST2-FG2)

Similarly, another junior student mentioned his negative emotions about working independently.

Each student in my class was required to submit a draft of the literature chapter independently, but I felt confused. I was instructed to find articles discussing the same research topic, but I did not know how to read them. As a result, I ended up feeling frustrated. (ST3-FG3)

High Expectations and Overwhelming Feelings

Some other junior students mentioned supervisors' expectations for quality, manifested through fixed deadlines, the completion of many tasks, or the requirement to meet high standards. These expectations resulted in heightened levels of anxiety among the students. Examples of students' voices are below:

Our supervisor was enthusiastic and readily available whenever we sought help. He advised us to practice diligently to improve our research knowledge and skills, assigning us plentiful assignments to be completed

within specified deadlines. However, my teammates and I often felt overwhelmed and constantly anxious about managing our workload or meeting deadlines. (ST2-FG1)

Another student mentioned experiencing significant stress when required to write his paper without any English errors.

I struggled with writing in English, and my supervisor expected my paper to be written in flawless English. He was dissatisfied with my initial drafts, which led me to revise them several times. This process made me start doubting my writing abilities and turned that period into a particularly stressful time for me. (ST4-FG3)

Critical Feedback and Fear of Judgment

Other senior students shared that they felt criticised and undervalued when receiving feedback from their supervisors. They mentioned their fear of judgment and the pressure to perform well.

My supervisor was meticulous when providing feedback, a quality not often found in many supervisors. However, she often criticised me and my classmates for our mistakes, even when not everything we did was wrong. I felt constantly judged and under pressure to perform perfectly to meet her expectations. (ST5-FG3)

I noticed that my supervisor rarely acknowledged our efforts or

improvements. Her harsh comments primarily focused on what was wrong and how to address the issues. While I understood that her feedback ultimately helped us improve, I often felt hesitant to submit my work to her, fearing judgment and criticism. (ST1-FG2)

DISCUSSION

In the limited number of studies investigating research anxiety among undergraduates, this paper explores the differences in anxiety levels across various demographic variables and examines the correlation between anxiety and perceptions of supervisor support. The study's results indicate that anxiety levels varied among students based on gender, field of study, and year of study. A weak positive relationship was found between anxiety and perceived supervisor support, with qualitative data offering further insights into this connection.

Previous studies (e.g., Angaiz et al., 2021; Dönger et al., 2017; Natividad et al., 2019; Oguan et al., 2014) have suggested that there is no difference in research anxiety levels between male and female students. However, in the current study, females tended to have higher anxiety levels compared to their male counterparts. This finding aligns with previous research indicating that female undergraduates displayed higher levels of anxiety in science (Cooper et al., 2023; England et al., 2019; Mohammed et al., 2021) compared to their male peers. Researchers have not reached a consensus with respect to the mechanism responsible

for these differences. One explanation for the gender gaps in anxiety can be attributed to cultural and psychological influences such as gender roles and social pressure (Hosseini & Khazali, 2013). Women are more inclined than men to articulate concerns related to anxiety (Bernstein et al., 2006). It is expected that further research into research anxiety will clarify the merits of these explanations. Supervisors at the local university should recognise the higher anxiety levels experienced by female students compared to their male counterparts when providing guidance, assigning tasks, or evaluating performance. Adopting a supportive and empathetic approach can help female students feel more comfortable sharing their research challenges and seeking assistance. Encouraging female students to engage in collaborative projects and peer support groups can also mitigate feelings of isolation and bolster their confidence.

Variations in anxiety levels were observed among students from three different areas of study. Students in the Business and Management group exhibited the highest anxiety level, while those in the Technology and Engineering group reported the lowest anxiety levels. There were differences in anxiety levels between students in the Technology and Engineering group versus those in Business and Management, as well as between Technology and Engineering and Social Sciences. One reason for these variations in anxiety levels could be the nature of the research activities undertaken by the students. Students in the Technology

and Engineering group reported the lowest anxiety levels, which might be related to the emphasis on practical, solution-oriented research in their field. This focus may reduce the perceived uncertainty and complexity often associated with research.

In contrast, the nature of research projects in the Business and Management group is more dynamic, leading students to feel greater pressure to complete their research, which can result in higher anxiety levels. Other factors, such as the complexity of research methodologies applied in each field of study (Gustafsson & Hagström, 2023) or the perceived level of peer support and collaboration (Aschbrenner et al., 2016), could also contribute to these differences and warrant further investigation. To alleviate anxiety among students in the Business and Management group, supervisors should enhance students' competence in research methods by organising workshops or tutorials focused on quantitative and qualitative research techniques tailored to Business and Management projects. Administrators could consider establishing partnerships with industry professionals to provide students with real-world insights and mentoring opportunities.

The variations in anxiety levels among different academic disciplines are consistent with prior research, such as that of Dönger et al. (2017), which indicated the variations in anxiety levels between students coming from different disciplines. In this study, Art Education students showed the lowest anxiety level compared to students in Turkish Language Teaching, Science Education, and

Computer and Instructional Technology Teaching. However, the variations in anxiety levels among students from different areas of study contradict the findings of Adaboh et al. (2017). In their study, there was no difference in anxiety levels between students in the Nursing program and those in the Education Programme. Both groups experienced moderate levels of anxiety during the research process. Owing to the inconsistent findings in the literature and the lack of studies examining the anxiety levels of undergraduates, more research is needed.

In our study, juniors and seniors seemed to experience more research anxiety than freshmen and sophomores when conducting research. This finding is in contrast with studies suggesting that students in their third and last years exhibited lower levels of anxiety compared to students in the first or second years. For example, when investigating the mental health issues of undergraduates at a university in Ohio, Beiter et al. (2015) found that compared with freshmen, juniors, and seniors scored lower on depression, anxiety and stress scales due to their experience in dealing with those issues. In the research conducted by Lomotey (2021), the language anxiety level was highest for freshmen, and anxiety levels decreased linearly with respect to year of study. Anxiety was found to decrease as experience and proficiency increased over the years. At the local university where our study was conducted, the primary research activity for freshmen and sophomores is to participate in the research methods course. Students typically undertake their thesis

graduation projects during their third or final years. Many research projects, often in collaboration with companies, explicitly prioritise the recruitment of juniors and seniors. In comparison to the knowledge and skills required by the research methods course, those necessary for company projects and graduation projects involve more sophisticated concepts, methodologies, and analytical skills. In addition, some seniors and juniors, during discussions, expressed feeling pressure to produce high-quality research outcomes and to meet greater expectations from supervisors for independent work. Therefore, the anxiety levels of juniors and seniors were higher than those of freshmen and sophomores in this study.

The current study also explored the relationship between research anxiety and perceived supervisor support. Quantitative data suggested that higher levels of anxiety were, to some extent, associated with increased levels of support. Qualitative findings gave insights that help explain this weak positive relationship. The supervisors expected independent work and quality outcomes while students preferred clear guidelines and research standards aligned with their current abilities. The expectation discrepancies resulted in increased anxiety about research abilities among the students. This finding may imply that some additional factors, such as students' personalities, perceived research competence, or cultural influences, likely impact the relationship. Recent studies suggest that personality moderates how students experience and

respond to stressors, including research anxiety (X. Wu et al., 2024). Efficacious students are more resilient to anxiety than their less efficacious peers (Mensah et al., 2023). Cultural norms also shape how students perceive negative or positive supervisory interactions, with collectivist societies often emphasising respect and harmony (Han et al., 2022), which can influence these dynamics. Therefore, further research should be conducted to investigate these factors to obtain a more comprehensive understanding.

The positive relationship between research anxiety and perceived supervisor support contradicts the findings of prior studies (e.g., Liu et al., 2019; Ma et al., 2024), which indicated a negative correlation between the two variables. The relationship between research anxiety and perceived support has not been the focus of many studies yet. Additionally, nearly all current studies exploring similar issues adopt a quantitative research design. Insights into the weak, positive relationship in this study were discovered via qualitative data. The need for more empirical research employing qualitative designs is evident to better understand the nuanced dynamics between undergraduate research anxiety and perceived supervisor support, particularly given the unique insights qualitative approaches can offer into individual experiences and perceptions (Creswell, 2012).

In this study, certain juniors and seniors recounted instances where supervisors failed to acknowledge their perspectives,

including expectations for clear guidelines and research standards aligned with their current abilities. The requirement of quality research outcomes and independent work resulted in their high anxiety levels. The ignorance of student perspectives and needs likely resulted in expectation discrepancies between supervisors and students, leading to increased anxiety among the students. Overall et al. (2011) suggested that in encouraging students to make their own decisions and be open with their ideas, supervisors need to acknowledge student perspectives. This study underscores the significance of effective communication between supervisors and students regarding research perspectives, expectations, concerns, guidelines, and standards to mitigate discrepancies and anxiety. Regular meetings with transparent communication about these issues provide a vital platform for facilitating such discussions.

Alternatively, Maschi et al. (2012) recommended the use of informal talks between supervisors and students whenever the supervisors perceive a high level of anxiety among students to continually monitor their research anxiety and address it promptly. To ensure the effective communication of such informal talks, it is essential to integrate key Vietnamese cultural factors, including the concept of *face* (N. T. H. Pham, 2007) and respect for teachers (Phan, 2011). The deeply ingrained cultural emphasis on preserving *face* often discourages Vietnamese students from openly expressing concerns or admitting difficulties, as doing so may be perceived as

a loss of dignity or competence. Similarly, the hierarchical tradition of respecting authority figures like supervisors can create a sense of intimidation, further inhibiting open communication. To address these barriers, holding informal meetings in relaxed settings, such as over coffee or outside formal office hours, can help reduce perceived formality and encourage open dialogue. Furthermore, when supervisors share their own challenges or mistakes from their research journey, or personal stories of struggles faced by other students, they humanise their role and dismantle the image of infallibility often associated with authority figures.

In addition, our findings suggest that supervisor support may not uniformly reduce the anxiety levels of all students in one class or one group, as anxiety levels differed based on gender, year of study, and field of study. Therefore, recognising the diverse research needs and motivations of all students is crucial. It would be helpful if supervisors tailor their support strategies based on student characteristics and preferences, considering factors like gender, prior research experience, academic level, and study disciplines. To achieve this, supervisors can conduct initial assessments using surveys to identify specific research areas where students require guidance, enabling personalised support. Additionally, employing varied teaching methods that align with students' backgrounds and academic profiles may also prove effective. For instance, first-year students may benefit from simplified explanations and step-by-

step guidance, while senior students might prefer mentorship in advanced topics. Given the limited research opportunities available at the local university, it is essential for faculty to organise workshops tailored to students' needs and academic disciplines. Examples include workshops on research proposal writing for those with limited experience or advanced statistical techniques for students seeking more specialised skills.

Last but not least, research indicates that negative evaluations from instructors can heighten student anxiety and impact learning motivation (Downing et al., 2020), as such feedback often instils feelings of failure (Fong et al., 2018). In our study, perceived judgmental responses created pressure and a feeling of research incompetence among certain students. Meanwhile, emotional support from supervisors alleviated the anxiety levels of most students. Consequently, supervisors may consider modifying their research feedback practices, particularly those that tend to elicit high levels of anxiety in students, such as judgmental responses. Supervisors may opt for feedback that offers specific suggestions for research improvement, delivered respectfully (Y. Wu & Schunn, 2020) and grounded in the interactions and relationships between supervisors and students (Fong et al., 2018). The university and faculties could consider offering training programs for supervisors on effective feedback delivery, emphasising constructive, respectful, and motivational approaches. Additionally, establishing anonymous channels for students to share

feedback about their supervision experiences could further enhance supervisory practices.

This study fills a gap in the literature on the research anxiety of undergraduate students as well as the relationship between research anxiety and perceptions of supervisor support. It contributes to a widened understanding of how research anxiety manifests in the Vietnamese context. One key contribution of the study is that it provides examples challenging the claim that supervisor support can positively impact the mental health of research students (Friedrich et al., 2023) and that research anxiety and supervisor support are inversely related (Liu et al., 2019; Ma et al., 2024). In relation to this, our study lends support to the work of Cohen and McKay (1984), Devos et al. (2016), and Pyhältö et al. (2015), who argued that support can have negative effects if it creates pressure or if there is a mismatch between supervisors' expectations and students' capabilities.

Current studies investigating research anxiety and its correlation between research anxiety and perceptions of supervisor support often rely on survey methods, without detailed explanations or examples of how students' experiences shape their perceptions of supervisor support. This study has responded to the need to explore the correlation between research anxiety and perceived supervisor support using a mixed-methods approach. Quantitative data revealed correlations between the two variables. At the same time, focus group discussions captured the complexity of students' experiences. They helped

clarify an unexpected finding from the quantitative data—a positive relationship between perceptions of supervisor support and research anxiety. Overall, the study underscores the importance of integrating qualitative and quantitative data to obtain a more comprehensive understanding of research anxiety, as qualitative data helps contextualise statistical correlations and reveals nuanced experiences that surveys alone may overlook.

CONCLUSION

This study contributes to the existing literature by focusing on Vietnamese undergraduates, a population that has been under-researched. It compared anxiety levels across various demographic variables and investigated the correlation between research anxiety and perceived supervisor support among the students, both of which are under-explored topics. An explanatory mixed-method design was employed to overcome the limitations of relying on a single method, thereby enhancing the depth and significance of the analysis. The study's results indicate that research anxiety levels varied among students based on gender, field of study, and year of study. A weak positive relationship was found between anxiety and perceived supervisor support, likely due to students' perceived discrepancies in expectations.

Limitations and Recommendations

The current study has several limitations that should be considered when interpreting its findings. Because participants were not

selected through randomisation, the students who responded to the questionnaire in this study may not represent the broader population of undergraduates. Instead, they might reflect a more motivated group of students. To create a more representative sample, future research should employ random sampling techniques, where every individual in the population has an equal chance of selection. Conducting the research at multiple sites or in different cultural contexts could enhance the robustness and generalizability of the findings.

The study employed a cross-sectional research design, which may not be robust enough to explore causal relationships between perceived supervisor support and undergraduates' research anxiety. Future researchers may wish to use experimental designs to better establish the relationship between these variables. Conducting longitudinal studies to track changes in students' research anxiety and the types of support they receive as they progress through higher education levels would be beneficial. Additionally, the study relied on self-reported data and retrospective information, which may be subject to memory inaccuracies, potentially leading to reporting errors. To address this, future research could benefit from collecting data from both instructors and students to allow for comparisons. The qualitative phase of this study focused on explaining the relationship between research anxiety and perceived supervisor support, as it was considered a central theme requiring in-depth exploration. Other relationships

tested in the hypotheses were primarily addressed in the quantitative analysis. Future research could employ qualitative methods to investigate additional relationships, such as those between demographic factors (e.g., gender, year of study) and research anxiety, to provide a more comprehensive understanding. Despite these limitations, the present study reveals significant findings regarding the levels of research anxiety across various demographic variables and the correlation between research anxiety and perceived supervisor support. This study underscores undergraduate research anxiety as a potential focus for future interventions.

ACKNOWLEDGEMENT

This study is supported by the Industrial University of Ho Chi Minh City's 2024 Research Grant No. 68/HĐ-ĐHCN.

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Review Article

Dong Pipa Songs of the Dong Ethnic Group in China: A Systematic Literature Review

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ABSTRACT

This article reviews music research on Dong pipa songs, a musical genre performed by the Dong people, one of the 55 ethnic minorities of the People's Republic of China. It analyses 46 English and Chinese articles published between 2006 and 2023, following the recognition of the Dong pipa song as an Intangible Cultural Heritage of China. Literature reviews demonstrate that the existing research is categorised into six main areas: historical origins, musical characteristics, accompanying instruments, lyrics features, social functions, and cultural inheritance and preservation. The systematic literature review revealed limitations in the research on these songs, including the depiction of their musical elements through the lens of Western musical systems, the homogenisation of diverse regional styles, and the lack of human agency in examining musical development. This article highlights existing research gaps and suggests directions for future investigations.

Keywords: Chinese ethnic musical culture, Dong pipa songs, intangible cultural heritage (ICH), systematic literature review

INTRODUCTION

Dong pipa song is a musical form of the Dong people (Chinese: 侗族; pinyin: Dòngzú), one of the 55 recognised ethnic minority groups in China. It is also known as “Ga Pipa (嘎琵琶)”, which is performed in the Dong dialect that blends oral folk literature with singing, and has approximately 600 years of history in China (Luo, 2012; G. H. Zhang, 2012a). These songs are intertwined with their daily lives, encompassing many themes, including history, mythology, marriage, love, customs and ethics.

ARTICLE INFO

Article history:

Received: 09 October 2024

Accepted: 14 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.09>

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Dong pipa songs are performed in various forms, including solos, male-female duets, and group singing. Characterised by the styles of Ga Chang (嘎常, singing only) and Ga Jin (嘎紧, singing and narrating), performances sometimes include improvised lyrics (Xiao, 2009). This art form is accompanied by the Dong pipa, an instrument made by the Dong people. It is predominantly observed in the Dong ethnic minority regions of Liping, Congjiang, and Rongjiang counties in Guizhou Province, as well as in Sanjiang and Rongshui counties in Guangxi Province and Tongdao County in Hunan Province, China (Chen, 2022).

The Dong pipa song is a significant part of the Dong ethnic group's cultural heritage in China, reflecting their communal identity, social ties, and artistic creativity. This musical culture captures local history, community values, and intergenerational narratives. Beyond entertainment, it plays a vital role in social ceremonies, fostering participation and strengthening community bonds (Hu, 2022). The complexity and aesthetics of these songs highlight the artistic talents of the Dong people, demonstrating their adaptability to modernisation and globalisation. Recognised in 2006 on China's Representative List of Intangible Cultural Heritage (ICH), the Dong pipa song gained elevated status and growing recognition, both within the Dong community and in the broader context of Chinese cultural heritage. Since its designation as an ICH, researchers have examined various aspects of this tradition, including its unique musical features, preservation strategies, and methods to promote its integration into

modern society (Yan, 2023). This attention underscores its importance in safeguarding and celebrating the Dong cultural identity.

Despite efforts, the systematic review of Dong pipa songs has been limited due to several challenges. As a minority music genre, it has historically been overlooked in favour of Han music and other mainstream forms. Geographical remoteness and limited academic resources in the Dong regions have hindered comprehensive documentation. At the same time, the oral transmission of Dong pipa songs has led to a scarcity of written records, restricting in-depth analysis. The absence of a systematic literature review on Dong pipa songs could create some problems. On the one hand, it would limit understanding of their historical and cultural contexts, risking misinterpretations. On the other hand, important musical characteristics might be overlooked, jeopardising preservation efforts. Additionally, researchers might miss existing studies, hindering collaboration and slowing the development of effective preservation strategies (Chan, 2022). Practitioners seeking to revive Dong pipa songs may lack crucial resources, resulting in inadequate representation of the tradition. Without a systematic review, efforts to safeguard this intangible cultural heritage could be diminished, affecting academic scholarship and community engagement.

The systematic literature review focuses on the main areas of Dong pipa research, including historical origins, musical characteristics, accompanying instruments, lyrical features, social functions, and cultural transmission and preservation.

The literature review and analysis explain the interrelationships between the various research fields and provide an overview of trends in the research object. The study also uses critical analysis to point out the shortcomings of past research. It seeks to identify significant gaps that warrant further exploration, providing a foundation for future studies and promoting a deeper understanding of this rich cultural tradition. It informs future research, supports intangible cultural heritage preservation, and emphasises the value of this unique art form. Additionally, situating Dong pipa songs within global musicological discussions fosters academic and cultural dialogue, promoting broader appreciation for this distinct tradition.

This paper systematically reviews the literature on Dong pipa songs, summarising previous research directions, identifying gaps and proposing future research orientations. This research recognises the inclusion of the Dong pipa songs on China's ICH list in 2006 as a crucial temporal milestone that marks a turning point in the scholarly focus on this culture. To facilitate a thorough literature review, the paper establishes explicit inclusion and exclusion criteria for literature retrieval based on this significant designation.

METHODS

The research on Dong pipa songs employs a systematic literature review to comprehensively assess the existing literature, rigorously gathering, evaluating, and interpreting all relevant studies to

ensure a thorough understanding of the topic. The review involves formulating research questions targeting aspects of Dong pipa songs, such as origin, historical development, musical structure, and performance practices, to identify key themes and gaps in existing scholarship.

This section outlines a detailed plan for systematically analysing Dong pipa songs, including criteria for selecting high-quality, relevant sources to enhance the reliability and validity of findings. The review utilised respected academic databases, including the China National Knowledge Infrastructure (CNKI), the Social Science Research Network (SSRN), ProQuest, SpringerLink, Taylor and Francis (T&F), and JSTOR, which are known for their credibility and high-quality literature.

The study focused on materials published between January 2006, the date marking the milestone of Dong pipa songs being listed as an ICH, and December 2023, the end of data collection. Both Chinese and English keywords, including “侗族琵琶歌”, “琵琶歌” or “嘎琵琶” (Chinese); “Dong pipa song” or “Kam music” (English), were used, along with a manual literature search to ensure comprehensive results. This rigorous approach increased the depth of analysis and ensured all relevant literature was included. Detailed inclusion and exclusion criteria are provided in Table 1.

As shown in Figure 1, 176 relevant publications were identified based on the established criteria, including 150 in Chinese and 26 in English. The researcher evaluated the quality of the articles, including scholarly originality and journal

Table 1
Inclusion and exclusion criteria for retrieved articles

Criteria	Type	Description
Exclusion	Fundamental information lacking (FIL)	Incomplete information on authors, organisations, abstracts and journals
	Without full text (WFL)	Unable to access full text
	Not related (NR)	NR-1: Non-academic articles, such as newspapers NR-2: General journal articles that did not fall within the inclusion criteria NR-3: Articles published beyond the designated period
Inclusion	Related (R)	R-1: Title or abstract contains keywords: “侗族琵琶歌”, “琵琶歌” or “嘎琵琶” (Chinese); “Dong pipa song” or “Kam music” (English) R-2: High-quality journals related to research topics, including articles from Peking University Chinese Core Journals and Chinese Social Sciences Citation Index [CSSCI], master’s and doctoral theses; articles from Social Sciences Citation Index [SSCI], Science Citation Index [SCI], and book chapters R-3: Articles published during the period from January 2006 to December 2023

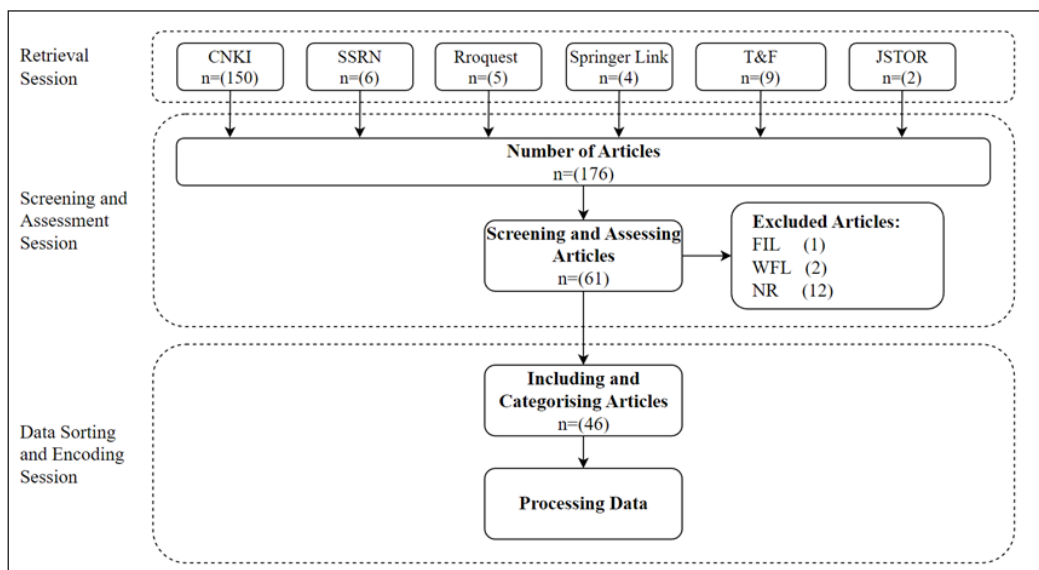


Figure 1. The flow of article assessment and screening

ranking, to select those that aligned with the research orientation and criteria of the study. After removing duplicates, titles and

abstracts underwent an initial screening to exclude less relevant articles. A detailed review of 46 publications (31 Chinese

Table 2
Theory on the classification of musical research

Type	Description	Purpose
Historical	Historical research explores music's origins, evolution, and transformative processes. Yu (1997) emphasised going beyond chronology to understand genre emergence, key influences, and cultural impacts, using documents and oral. This kind of research reveals music's intricate ties to its broader historical context.	This dimension serves as a foundational layer, revealing the intricate connections between music and the broader historical context in which it is embedded.
Stylistic	Yu's (1997) framework analyses melody, harmony, rhythm, texture, lyrics, and instruments to define musical styles, revealing their aesthetic principles, cultural significance, and emotional content.	By examining these characteristics, researchers can classify different musical styles and understand how they convey meaning, emotion, and identity.
Functional	Functional research examines the role of music within societal and cultural contexts, exploring its significance in various social settings, from religious ceremonies to political movements. Yu (1997) highlighted music's role in shaping community identities, fostering social cohesion, and transmitting cultural heritage.	This category investigates how music serves as a medium of communication, an educational tool, and a source of individual and collective expression, emphasising its multifaceted influence on both personal and social levels.

Source: Yu (1997)

and 15 English) followed, examining their relevance, contribution, and adherence to the research focus. Articles failing to meet the rigorous criteria set at the start were excluded from further analysis.

Data extraction entailed compiling detailed information from each selected source into a standardised format, including author details, publication year, research scope, methodologies used, key findings on Dong pipa songs (such as lyrical content, cultural context, and musical analysis), and notable conclusions or insights. This step ensured the systematic capture of relevant information for synthesis. The extracted data is then synthesised and analysed. Depending on the nature and diversity of the studies included, this synthesis involved a qualitative thematic analysis, focusing on identifying overarching themes such as the

role of songs in Dong culture, the stylistic features of pipa performance, its evolution over time, and how it has been preserved or transformed in modern contexts. Finally, the review is documented following established guidelines like the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses; Page et al., 2021) framework, ensuring transparency, reproducibility, and comprehensiveness.

The literature review on Dong pipa songs required a thoughtful approach to categorising and classifying the various research topics. To achieve this, this paper drew upon Yu's (1997) music research classification theory, which provides a comprehensive framework for analysing music by dividing it into three main categories: historical, stylistic, and functional, as shown in Table 2. This research

goes beyond a simple reproduction of Yu's work by applying this foundational theory to the specific context of Dong pipa songs. It innovatively refines its classification system to better fit the unique musical tradition of the Dong people. Based on an in-depth analysis of the literature specific to Dong pipa songs, the study delineates six refined topics for further exploration: historical origins, musical characteristics, accompanying instruments, lyrical features, social functions, and cultural transmission and preservation.

RESULTS AND DISCUSSION

Research on the Dong pipa song can be categorised into six main areas: historical origins, musical characteristics, accompanying instruments, lyrical features, social functions, and cultural transmission and preservation. Each area offers unique insights into this musical tradition, thereby enhancing our understanding of its role within the Dong ethnic community and its broader cultural significance. This section delves deeper into each category, discussing key findings from the literature.

Historical Origins

Cultural practices' origins support a civilisation's entire structure. Whether tracing a ritual's lineage or an art form's genesis, the origins of cultural history offer us profound insights into the human condition (Hobsbawm & Ranger, 1983). The historical perspective seeks to explore the continuity and transformations within the cultural tradition of Dong pipa songs and

elucidate the factors that influence Dong's social structures, contemporary practices, and conservation policies. Scholars focused on the history of these songs and analysed how these cultural forms have been shaped, transmitted and transformed throughout history. As the Dong minority lacks a written script, their traditions, including Dong pipa songs, are perpetuated through oral transmission and embedded in their collective memory (Assmann & Czaplicka, 1995).

Scholars discussed the origins of Dong pipa songs by examining oral histories provided by bearers of this tradition, attributing these origins to various mythological accounts. Numerous accounts detail their genesis, highlighting differing historical perspectives. C. Z. Yang (2010) suggested the genesis of these songs in the Yongle era (1403–1424) of the Ming Dynasty in Hongzhou Town, Guizhou Province, China. According to local Dong folklore, these songs originated from the tradition of love song duets accompanied by the pipa, performed during courtship rituals between young men and women.

Luo (2014) expanded upon C. Z. Yang (2010) by documenting various historical legends concerning the origins of Dong pipa songs, as detailed in Table 3. Besides, Luo posited that the Dong pipa originated during the Tang and Song Dynasties (618–1368); thus, these songs emerged during this era rather than in the later Ming and Qing Dynasties. However, Luo failed to provide any supporting evidence for the emergence of the Dong pipa during the Tang and Song

Dynasties, such as historical documents or sources. Consequently, the precise origin of Dong pipa songs remains elusive. J. C. Zhang (2020) also pointed out three historical legends about the origin of these songs, presenting claims that corroborate and differ from Luo (2014), as shown in Table 3.

Overall, scholarly research on the origins of the Dong pipa song presents three distinct perspectives: creationism, artificialism, and functionalism. However, there is a notable absence of historical evidence to substantiate these claims, as neither written records nor archaeological discoveries have been found. This is mainly due to two factors: first, the Dong ethnic group is traditionally non-literate, limiting their ability to document information before interacting with the Han Chinese. Many culture details, including the origins of the pipa song, may have been distorted or lost through oral transmission. Second,

although the Dong pipa as a musical instrument has existed for hundreds of years, its rudimentary craftsmanship and the perishable nature of wood make it difficult to trace its origin archaeologically. As a result, no definitive historical evidence can be established, and scholars must rely on oral folklore to construct a historical narrative of this significant musical tradition.

Musical Characteristics

As a singing-based musical form, Dong pipa songs have attracted scholarly attention primarily for their musical structure. Scholars have conducted extensive analyses on the scores of songs, and there is a consensus that these songs predominantly utilise the Chinese pentatonic scale, specifically the *yu* (羽) mode (Huang, 2009; Luo, 2014; Zhou, 2016). However, this consensus is problematic since the analysis relies on the Western tonal system, based on equal temperament, while the tonal system of

Table 3
The legends of the origin of the Dong pipa song

Type	Luo (2014)	J. C. Zhang (2020)
Creationism	Dong boys and girls beseech the Heavenly Emperor to bestow upon their village music and instruments, such as lusheng, pipa and songs.	
Artificialism	The folklore recorded in the religious poem described Wu Mei carving a pipa from wood to perform a song	The folklore recorded in the lyrics describes Wu Mei carving a pipa from wood to perform a song.
Functionalism	Ritualistic function: The song, originally sung by a daughter-in-law in memory of her deceased father-in-law, evolved into a pipa song Interactive function: An arhat and a young girl establish a love relationship through the Dong pipa songs	Entertainment or educational function: Mr Siye, the founder of pipa songs, used it to preach around

Source: Luo (2014), J. C. Zhang (2020)

Dong pipa songs is influenced by regional aesthetics, varying across regions, counties, and villages, and does not conform to the Western twelve-tone scale.

Huang (2009) identified common rhythmic patterns, including four-two, four-three, and four-four beats, with occasional mixed meters during improvisational segments. There is a disagreement regarding how the musical sections in Dong pipa songs are divided and structured. Huang (2009) and Luo (2014) contend that the frequent incorporation of quarter notes, eighth notes, and sixteenth notes defines the musical texture. In contrast, Zhou (2016) maintained that the prevalent use of dotted and syncopated rhythms distinguishes the musical structure of these songs. These statements are problematic because the rhythmic patterns defined are based on the Western notation system. This creates boundaries to rhythmic patterns in Dong pipa songs that cannot be notated using this system.

The dissemination of Dong pipa songs across various regions of Guizhou, Guangxi, and Hunan in China (Luo, 2015) has led to the development of distinctive regional styles influenced by local cultures, prompting interest in their musical characteristics, particularly in Guizhou. J. G. He (2017) examined the Dong pipa songs in Guizhou, employing the core melodic pattern (核心歌腔) concept introduced by Pu (1987). This analytical method resembles Schenkerian analysis (1935), which includes foreground, middle-ground, and background levels. J. G. He (2017) contended that the core melodic

pattern of these songs comprises four pitches—E, D, C, and A—derived from the Chinese pentatonic scale. However, using Western notation to compare these regions' tonal systems fails to capture the accuracy of these songs in terms of tonal systems, rhythmic patterns, musical structures, singing techniques, and vocal production, as well as the unique extra-musical sounds and timbres.

Zhu (2019) expanded previous research, which focused on the musical characteristics of Dong pipa songs within a specific locality, by conducting a comparative analysis across multiple regions. Zhu's study examined three varieties of pipa songs from the southern Dong region in Guizhou, as detailed in Table 4. However, Zhu did not explain the reasons for the stylistic differences between regions. One of the significant improvements made by Zhu (2019) was that he included an arrow to indicate that the pitches on the Dong pipa tonal system, depicted using the Western equal temperament, were either sharper or flatter (shown in Liudong tone row in Table 4). Perhaps Zhu realised that forcing each region's musical aesthetics into fixed pitches based on equal temperament was inaccurate.

The pitch range of Dong pipa songs is a topic of debate. Zhu (2019) challenged Q. J. Yang's (2014) assertion that the Chejiang pipa song spans an octave, asserting instead that their range is limited to a major sixth. L. He (2021) examined the musical characteristics of the Liudong Ga Pipa, disagreeing with Zhu (2019) by suggesting the range does not exceed five degrees, with a notable five-degree descent from E to A as

Table 4

Musical characteristics of Dong pipa songs in three regions of Guizhou

Characteristic	Liudong Ga Pipa (六洞嘎琵琶)	Chejiang Ga Pipa (车江嘎琵琶)	Hongzhou Ga Pipa (洪州嘎琵琶)
Classification			
Pitch Range	Within a significant sixth interval	Within a major sixth interval	Within an octave interval
Register	f ¹ - g ²	f ¹ - g ²	f ¹ - a ²
Mode	Pentatonic Yu mode containing uncertain variable tones	Pentatonic Yu mode	Pentatonic Yu mode
Tone Row	6 1 1↑2 3 4↑5 (The arrow indicates that the pitch of the preceding note is slightly higher than the actual pitch)	5 6 1 2 3	5 6 1 2 3
Musical Tempo	♩= 65–75	♩= 89–98	♩= 105–115
Rhythmic Characteristics	Freer	Relaxed and smooth	lively
Song Structure	The opening part and the central part	The opening part, the central part, and the ending part	The opening part and the central part

Source: Zhu (2019)

a key melodic feature. Furthermore, Zhu's (2019) interpretation of the tonal mode of Hongzhou pipa songs also contrasts with C. Z. Yang's (2010) perspective. C. Z. Yang contended that Hongzhou pipa songs are tuned using alternating pentatonic gong (宫) and yu modes instead of solely the pentatonic yu mode. Conversely, Zhu (2019) argued that these songs are characterised by pentatonic yu mode, and gong mode is rare.

While Huang (2009), Luo (2014) and Zhou (2016) have enlightened researchers on the tonal systems of Dong pipa songs in various regions of China, they have utilised an "Orientalist" (Said, 1978) approach to examining these songs. Their musical analysis was conducted through the "lens" of Western musical notation systems. In

addition, the musicological analysis remains a crucial and fundamental issue. All these scholars did not discuss human agency in the variations of Dong pipa songs performed by the various regions of China (Merriam, 1964). The denial of humans in the variation of musical production about political, social, cultural, and economic phenomena across time and space presents a problem in the research of these scholars.

Understanding how to sing Dong pipa songs constitutes a crucial aspect of this research area, with prior studies focusing on performance procedures and forms as well as vocal techniques. Zhou (2016) and H. W. Wu (2018) maintained that performances of these songs follow a defined sequence: introductory, central and concluding.

Conversely, Zhu (2019) examined the performance practices of Chejiang Ga Pipa within Dong cultural activities, highlighting its role in various social and ceremonial contexts, such as Wei Ban (social gatherings for youth), Wei Ye (inter-village collective visits), and celebrations of New Year's Eve and weddings.

Luo (2014) distinguished the performance forms of Dong pipa songs based on their content, categorising them into three types: duet songs, encompassing female and mixed-gender duets; Xiu Yin, where Dong women sing pipa songs while weaving and embroidering; and pipa songs and dances, which combine playing, singing, and dancing, typically performed during marriage celebrations, harvests, and village festivals.

As mentioned in the previous section, the Dong pipa songs prevalent in Dong

settlements across Guizhou, Guangxi, and Hunan Provinces exhibit regional features influenced by local cultures, manifesting in diverse linguistic characteristics and performance styles. Research indicates that the primary performance forms remain consistent across different regions. However, there are slight differences in the regulations regarding the singers' gender, as shown in Table 5.

Q. J. Yang (2014) examined the customs and taboos associated with singing Chejiang Dong pipa songs, emphasising that performers must adhere to specific cultural practices. Q. J. Yang asserted that these songs inherently social behaviours focused on marital relationships and strictly prohibit singing among relatives. However, Zhu (2019) argued that in the contemporary context, there are no such taboos on singing pipa songs, and these songs can also be a

Table 5
Performance forms of pipa songs in different regions.

Region	Types	Performance form
Guizhou Province	Chejiang pipa songs	Group duets, with a man playing and a woman singing (Q. J. Yang, 2014; Zhu, 2019)
	Hongzhou pipa songs	A male-female duet; a man playing and singing; a man playing and a woman singing (C. Z. Yang, 2010; Zhu, 2019)
	Forty-eight village pipa songs	No limitation on the number and gender of singers and performers (Zhu, 2019).
	Liudong pipa songs	A male-female duet; a man playing and singing; a man playing and a woman singing (L. He, 2021; Zhu, 2019)
	Judong pipa songs	Group duet or men playing with women singing (L. He, 2021)
	Pingjiang pipa songs	Group duet or men playing with women singing (L. He, 2021)
Guangxi Province	Xunjiang pipa songs	No limitation on the number and gender of singers and performers (H. Q. Wu, 2013)

Source: C. Z. Yang (2010), H. Q. Wu (2013), Q. J. Yang (2014), Zhu (2019), L. He (2021)

daily entertainment form within the clan or family.

Previous studies demonstrated that musical characteristics are integral to understanding Dong pipa songs. Research highlights stylistic variations across transmission regions like Guizhou, Guangxi, and Hunan, involving differences in pitch range, tonality, rhythm, beat, singing style, and performers' gender. However, most findings remain introductory and are often confined to specific geographical areas, with limited comparative research across regions. This gap restricts understanding of broader trends in pipa songs. More critically, the causes behind these stylistic differences, such as cultural integration, governmental policies, and evolving aesthetic preferences, have not been fully examined, leaving critical aspects of musicals insufficiently addressed.

Accompanying Instruments

Discussing Dong pipa songs, a musical genre that integrates both playing and singing, is essential to understanding their associated instruments. While it is widely accepted that these songs are typically accompanied by the Dong pipa (Luo, 2014; Zhou, 2016), Q. J. Yang (2014) highlighted an exception in Chejiang Township, Guizhou Province, where these songs are also accompanied by the niutuiqin (牛腿琴), an ancient Dong stringed instrument named for its resemblance to a cow's thigh, is frequently used as an accompaniment in the region.

Scholars have categorised the types of Dong pipa in detail. According to H. Q. Wu

(2013) and Luo (2014), the Dong pipa is classified into three sizes: large, medium, and small. The large pipa is a bass, called bibalao (比巴劳) in the Dong dialect, produces a low, soft tone and primarily accompanies narrative songs. The medium pipa is an alto, called gaheiyuan (嘎黑元), which features a thicker tone and supports narrative and lyrical pipa songs. Lastly, the small pipa is soprano, known as bibala (比巴拉), is played with a light, active touch and is predominantly used in lyrical songs performed during folk activities such as Nightly Love Songs (行歌坐夜).

Scholars have also examined the distribution of the Dong pipa in the counties and villages of Guizhou, Hunan, and Guangxi. Wei (2015) highlighted that the large Dong pipa predominates in Rongjiang and Liping Counties of Guizhou Province, whereas the small Dong pipa is primarily found in Hongzhou Town, Liping County. H. Q. Wu (2013) observed that the medium Dong pipa is common in Sanjiang County in Guangxi Province and Tongdao County in Hunan Province. Additionally, Wu pointed out the small Dong pipa's popularity in Hongzhou Town, Liping County. Contrarily, Zhou (2016) concurred with the widespread presence of the large Dong pipa in the Guizhou region yet contested Wei's (2015) assertion regarding the distribution of the small Dong pipa. Zhou argued that it is predominantly found in Dong settlements within Hunan Province instead of Guizhou Province.

Moreover, scholars have proposed various perspectives on the performance

techniques of the Dong pipa. Luo (2012, 2014) identified two primary techniques: swept-string and plucked-string. The sweep-string method is predominantly used to amplify the rhythm during climactic sections of songs, thereby enhancing their appeal. In contrast, plucked-string accompaniment often involves the repetition of melody and rhythm at phrase transitions to ensure a seamless integration of voice and accompaniment. However, Zhou (2016) argued that the instrument has four playing techniques: plucking, picking, double plucking, sweeping and stroking the strings. H. W. Wu (2018), from a more objective perspective, contended that the techniques are not clearly defined and that it is feasible to name or perform them according to the performer's habits.

Research has revealed notable differences in the shapes and sizes of instruments accompanying Dong pipa songs. Scholars largely agreed that the distinctions made by Dong insiders are primarily based on the instruments' sizes. However, classifying these instruments is challenging, as terms like "large" pipa lack standardised definitions. Beyond size classification, further study is needed on playing techniques, including developing unified practice materials. These resources would aid in teaching the instrument while promoting its cultural significance and technical mastery.

Lyrics Features

The lyrics of Dong pipa songs reflect their artistic characteristics. C. X. Wu (2011) and

Luo (2012, 2014) noted that these lyrics typically comprise pairs of lines, each with an odd number of characters, although the specific count can vary. Notably, while individual lines contain an odd number of characters, the number of lines must be even. Through extensive analysis, Y. P. Shi (2016) observed that lines frequently contain 7, 9, or 11 characters but range from 3 or 5 characters to a maximum of 35 or 37 characters. Contrarily, Huang (2009) contended that the lyrics predominantly feature odd-numbered characters, though even-numbered character sentences are also present. Typically, odd-numbered sentences contain 3, 5, or 7 characters, while even-numbered sentences most commonly consist of 4 characters. These patterns can occur individually or in alternation. Furthermore, Wei (2015) suggested that although the predominant pattern in lyrics is odd-numbered, there are exceptions, such as some lyrics from Tongdao County in Hunan Province, which consist of even-numbered sentences with six characters.

Furthermore, investigating rhyme schemes in Dong pipa song lyrics constitutes a significant component of this research. C. X. Wu (2011) identified three primary traditional rhyming techniques in Dong folk songs: interleaved rhyme (正韵), mid-sentence rhyme (腰韵) and internal rhyme (内韵), a classification widely accepted (Huang, 2009; Q. J. Yang, 2014). Despite this consensus on categories, scholars diverge on the specifics of these rhyming methods. C. X. Wu (2011) and Q. J. Yang (2014) explained interleaved rhyme as

occurring at the ends of even-numbered lines, while midsentence rhyme involves a rhyme between the final character of odd-numbered lines and any character from the middle of even-numbered lines. Contrarily, Huang (2009) interprets midsentence rhyme as the rhyme linking the last character of one sentence to the first character of the next. Regarding internal rhyme, Huang (2009) defines it as a rhyme between two characters within a sentence section, specifically between the final character of one metrical unit and the first character of the next.

Diverse rhetorical devices notably characterise the lyrics of Dong pipa songs. Huang (2009) noted that these songs frequently employ parallelism, metaphor, antithesis, and repetition, enhancing the artistry and appeal of the lyrics. Wei (2015) concurred with this perspective. Liu (2012) conducted a case study on 238 love-themed pipa songs from five collections and concluded that metaphor is the most frequently employed rhetoric.

In addition, Y. P. Shi (2016) analysed the classical pipa songs of the Sanbao Dong ethnic group in Guizhou, focusing on the four-tone format (四音格), a key phonological feature in Sino-Tibetan languages. This format plays a significant role in structuring the rhymes within these musical compositions. Using four distinct pitch variations, it enhances the rhythmic and melodic qualities of the songs while aligning closely with the linguistic characteristics of the Dong language. Furthermore, X. T. Shi (2016) examined the lyrical content of four types of pipa songs—romantic, educational,

lyricism, and ceremonial—analysing the distribution of Chinese components and discussing the trends and implications of the Dong language's Sinicization, which pertains to the assimilation and integration of neighbouring ethnic groups by the Han Chinese, who are the predominant ethnic group within the Chinese nation as reflected in these lyrics.

Studies on pipa song lyrics focus mainly on linguistic and literary aspects, uncovering their meaning and recurring themes. However, many analyses neglect the crucial interplay between lyrics and music. While examining lyrics provides semantic and emotional insights, the relationship between phrasing, phonological elements, and musicality is often overlooked, despite its importance in performance.

Social Function

The significance of music to human existence warrants extensive discussion (Blacking, 1973). Merriam (1964) highlighted that understanding the functions of music is crucial for addressing the “why” behind its use, particularly in terms of its broader purposes. Within this framework, scholars agree on the role of Dong pipa songs in reinforcing social norms. Historically, the Dong people, lacking a written language, relied on singing for memory retention, communication, and cultural transmission (C. Z. Yang, 2010). These songs imparted knowledge and guided moral behaviours, promoting virtues and discouraging vices (Luo, 2014; Wei, 2015; G. H. Zhang, 2012a, 2012b; J. C. Zhang, 2020). Luo

(2014) contended that their influence lies in subtle indoctrination through musical interpretation, helping individuals discern right from wrong. C. Z. Yang (2010) and Wei (2015) further highlighted the crucial role of these individuals in imparting knowledge and moral education to the Dong community.

Luo (2014) noted that, besides their indoctrinatory role, pipa songs primarily serve as entertainment in the Dong community, a remote, mountainous area with limited recreational options. Moreover, these songs provide a means for emotional expression. C. Z. Yang (2010) emphasised the role of these songs in allowing young men and women to convey love and affection. However, these functions diminished due to modernisation. G. H. Zhang (2012a) concurred that the advent of modern networks and social media has profoundly reduced the opportunities for young individuals to engage in the cultural practices of playing and singing these songs. Consequently, Dong pipa songs have increasingly become a passive and government-led cultural exhibition.

Several scholars have posited that Dong pipa songs transcend mere emotional expression, serving as a bidirectional communication and interaction with a primary focus on communication. Liu (2012) highlighted that the prevalence of love-themed songs in the repertoire underscores its communicative role, including mate selection, love and marriage. Conversely, L. He (2021) argued that these songs facilitate communication between Dong men and

women, irrespective of marital status. He (2021) cited the Nightly Love Songs music events as evidence, noting that these songs primarily support the formation of marital ties for single attendees. In contrast, for those already in romantic or marital relationships, these gatherings help to expand their social networks.

Wei (2015) elucidated the multifaceted roles of Dong pipa songs, asserting that their functions extend beyond cultural transmission and aesthetic enjoyment to shape and reinforce the Dong people's identity. However, Wei did not specify which kind of identity was formed through these songs. Conversely, G. H. Zhang (2012b) delved into the pipa songs' contributions to ethnic identity and cohesion. Zhang stated that these musical practices foster a folkloric realm that facilitates ethnic gatherings, enhancing opportunities for interaction and communication among community members and strengthening ethnic cohesion.

Previous studies have examined the various social functions of Dong pipa songs, broadly classified using Merriam's (1964) framework for understanding music functions, including emotional expression, aesthetic enjoyment, entertainment, and the reinforcement of social norms. However, much research focuses on traditional roles while overlooking contemporary relevance. Urbanisation and modernisation have shifted performance contexts, diminishing traditional functions and introducing new roles, such as political propaganda and cultural display, extending beyond entertainment and emotional expression.

These transformations underscore the need to examine how traditional music functions in modern contexts.

Cultural Transmission and Preservation

In China, cultural heritage has been used to foster national cohesion, identity, and socio-economic development, enhancing the country's international image (Tan, 2018). Since recognising pipa songs in China as intangible cultural heritage in 2006, most studies have focused on the challenges and strategies for their preservation and transmission. In the study of ethnomusicology, "preserving" music has been replaced by "sustaining," as the former refers to "freezing or hindering" the natural movement of music as it interacts with various dynamics. Sustainability refers to the continuity of musical practices in the context of current social and cultural dynamics and the acceptance of musical changes as a human phenomenon. In this sense, the perception of conducting research among these scholars still connotes the notion of "preserving" musical traditions.

Luo (2014) examined how Dong pipa songs are preserved in Yangchong Village, Guizhou, noting that government and civil support have been crucial. Conversely, J. C. Zhang (2020) argued that their persistence mainly relies on spontaneous folk traditions, identifying family, master-disciple, and social folklore as key transmission modes. However, J. C. Zhang (2020) overlooked modern sustaining approaches, notably the systematic teaching facilitated by the government in educational settings.

Moreover, whether formally organised or informally propagated by the management company, the transmission is predominantly facilitated by adept practitioners—the culture bearers. Consequently, scholars (Lang, 2014; Lin, 2023; X. F. Yang, 2011) have employed a narrative methodology to elucidate the learning, preserving and transmission processes of these bearers of Dong pipa songs.

Traditional Dong pipa songs inherently deviate from modern life in form and content, presenting significant challenges to their transmission. Luo (2014) noted that modernisation, including media influences, rural youth migration, insufficient education, changing values, and popular music, has created a crisis for transmission. Similarly, Q. J. Yang (2014) identified changes in the ecological environment and agricultural practices as critical factors impacting the practice and transmission of pipa songs. Li (2022) attributed the declining influence of these songs to inadequate government promotion and highlighted issues with the synchronous cooperation between the government and the public in the transmission process.

Researchers have proposed strategies to address the challenges in transmitting pipa songs. Luo (2014) emphasised school education, suggesting the development of textbooks for primary and secondary schools on these songs and blending modern elements with traditional compositions to attract younger audiences. This recommendation is generally recognised by scholars (Q. J. Yang, 2014; J. C. Zhang,

2020). Conversely, L. He (2021) critiqued the classroom-based model, noting that integrating pipa songs into higher education tends to standardise styles. While this may improve vocal skills and stage presence, it risks diluting its authenticity and regional uniqueness.

The transformation of practice contexts has a significant impact on the transmission of pipa songs. Luo (2014) proposed establishing a folk culture preservation village to maintain its original context, support their transmission, and attract tourists. Additionally, adopting digital media technology is essential for revitalising traditional pipa song culture. J. C. Zhang (2020) highlighted the role of modern audio and video technologies in documenting performances and creating databases to consolidate research findings, making the preservation and retrieval of knowledge more accessible.

Furthermore, Li (2021) stressed the need to broaden the appeal of Dong pipa songs, especially among young people, beyond merely recording data for conservation. Li recommended using social media platforms like TikTok, Kwai, and Bilibili to share instructional videos or live courses and suggested government-supported competitions and performances with incentives. Li also highlighted the importance of policies that promote cultural protection, such as better remuneration for practitioners, to enhance their creative motivation and commitment to transmitting these songs.

Other Research Perspectives

As research progresses, scholarly perspectives on Dong pipa songs have become increasingly diverse and in-depth. Several scholars have discussed the interaction between pipa songs and other musical forms in the Dong region. For instance, Ingram (2011) examined the Dong grand songs, another significant cultural expression of the Dong ethnicity, highlighting a mutual exchange and influence with pipa songs. However, Ingram only acknowledged the presence of Dong pipa songs and failed to clarify the specific dynamics of the cultural exchange, such as the direction of influence. Subsequently, Ingram (2020) analysed state power's impact on preserving Dong's cultural heritage, including pipa songs, stressing the importance of localised listening to accurately capture local perspectives on cultural protection measures rather than solely relying on official statements and declarations. This approach aims to assess cultural policies' true impact and reception among the local population, offering a more nuanced critique of heritage protection strategies.

Mao et al. (2023) analysed Dong's musical forms, including pipa songs, within the framework of soundscape studies to examine the broader acoustic environment surrounding these traditions. By including pipa songs alongside Dong grand songs, the study highlighted the diversity of Dong musical expression and the influence of environmental factors. This research encourages further interdisciplinary

exploration of musicology, anthropology, and environmental studies to better understand the role of music in Dong culture. Watkins (2020) discussed the connection between various musical forms of the Dong ethnic group and their festival celebrations, noting its role in reflecting social and religious facets and reaffirming collective memory, including history, customs, and aesthetics. However, Watkins focused on the general characteristics of Dong music and omitted the unique aspects of pipa songs.

Several scholars have examined the dynamic musical changes of Dong pipa songs. L. He (2021) utilised an ethnographic approach to compare the historical and contemporary states of pipa songs in Congjiang County, Guizhou Province, examining their manifestations and the underlying causes of these changes. He observed alterations in various aspects, such as teaching approaches, musical instruments, gender roles in performances, learners' motivations, vocal techniques, lyrical content, performance style, and social functions. According to L. He (2021), these transformations are primarily driven by shifts in aesthetic preferences and the quest for economic benefits, leading to a continuous evolution towards a more commercial and utilitarian orientation.

Hu (2022) adopted Bourdieu's field theory (Bourdieu & Wacquant, 1992) to examine the transformations in Dong pipa songs. Hu identified several singing fields, including village life, stage performances, school education, livelihood performances and virtual networks. Hu contended that the

influence of capital and society has led to significant changes in the style and modes of interaction of pipa songs. Moreover, Ping and Chuangprakhon (2023) discussed the transformation of these songs in Rongjiang County, Guizhou Province, and noted the shifts in Dong people's lifestyle and the diminishing role of these songs in marriage and romantic functions.

Overall, the support for intangible cultural heritage policies has boosted the international recognition of Dong pipa songs, attracting research interest beyond China. Scholars have shifted their focus from textual analysis of the song as a musical form to an interdisciplinary approach that views it as part of culture. This shift examines how pipa songs interact with modern life, including social change, identity, and cultural representation, highlighting the importance of recognising living traditions as dynamic entities evolving with the communities that preserve them.

CONCLUSION

The existing literature highlights significant scholarly contributions to Dong pipa songs but also reveals limitations, guiding future research directions. Academic interest in Dong pipa songs, recognised as national intangible cultural heritage in 2006, has grown substantially, as shown by the diversity of research perspectives. Predominantly, researchers studying this subject have backgrounds in music and are affiliated with higher education institutions in Guizhou, Guangxi, and Hunan Provinces. Additionally, pipa songs, which represent

the rich local cultures of these regions, have attracted scholarly interest, supported by local government and university policies. Moreover, China's promotion efforts have boosted international interest in pipa songs.

The research approach in Dong pipa songs predominantly focuses on qualitative methods, with ethnography being the principal technique for data collection. From a musicological perspective, most scholars analyse Dong pipa songs, covering a broad spectrum of aspects, including history, musical characteristics, accompanying instruments, lyrical features, functions, and the preservation and transmission of the music. The discussions emphasise musical characteristics and strategies for preserving and transmitting these songs. Furthermore, since 2020, the influence of Western musical theories in China has prompted some scholars to expand their research on pipa songs beyond merely describing musical characteristics to examining the underlying reasons for its persistence in society, applying an ethnomusicological lens.

Implications of the Study

The systematic literature review on Dong pipa songs significantly contributes to understanding and preserving Dong's ethnic heritage. The review synthesises existing research by employing a rigorous and transparent methodology. It identifies key themes and critical gaps in the current literature, highlighting areas requiring further exploration, which pave the way for future research initiatives that can deepen our understanding of the complexities

surrounding Dong pipa songs and their societal implications. In addition, it enriches the academic discourse surrounding Dong pipa songs and serves as a knowledge structure for those dedicated to safeguarding this intangible cultural heritage for future generations.

Specifically, this review highlights the need for ongoing research into Dong pipa songs, emphasising their cultural significance within intangible cultural heritage. It identifies gaps, including the impact of urbanisation on performance practices and the role of digital media in dissemination, which are crucial for understanding how modern realities shape musical expression. Research on intergenerational transmission and social cohesion offers insights into cultural preservation mechanisms. Addressing these areas will enhance our understanding of the social, cultural, and historical dimensions of pipa songs, enriching scholarly discourse and informing effective preservation strategies.

The findings reveal that policymakers and cultural institutions need to implement measures to preserve and promote Dong pipa songs. The institutional support, such as funding for research, community programs, and educational workshops, is essential for sustainability. Grants for community-led performances can engage locals and encourage young people to learn from their elders. Integrating pipa songs into festivals or heritage tourism boosts visibility and appreciation among wider audiences (J. Wu, 2020). By fostering a supportive ecosystem,

policymakers can help pipa songs adapt to contemporary contexts while preserving their rich heritage.

The study emphasises the critical role of education, particularly combining cultural knowledge and skills training, in preserving pipa songs, as informed by insights gathered from the literature. Incorporating curriculum modules on its history and significance enhances students' appreciation, while workshops led by skilled musicians offer hands-on experience with playing and singing. This dual approach develops technical skills and fosters cultural identity, ensuring the heritage of Dong pipa songs is preserved and passed down through generations. Besides, this research highlights the potential of digital technology as a modern tool for preserving pipa songs, an area that has been insufficiently examined in the literature. Previous studies suggest that digital platforms, such as social media for sharing performances or tutorials, can engage younger generations and spark interest in this tradition. Online archives can also store and showcase recordings, providing access for researchers, students, and enthusiasts. These digital resources help pipa songs adapt to the modern era, reaching new audiences while preserving their authenticity and cultural significance.

Limitations and Recommendations for Future Studies

Despite extensive research on Dong pipa songs, several shortcomings remain. Firstly, the use of the Western equal temperament system to analyse elements

like melody, rhythm, and tonality reflects an "Orientalised" (Said, 1978) approach. While functional, this method overlooks local musical elements, such as microtonal musical techniques, diverse rhythmic patterns, and tonal systems outside equal temperament. Additionally, there is a need to identify local musical terms for discussing the techniques used in pipa songs.

Second, research on pipa songs shows an imbalance across different regions. While these songs are central to the cultural heritage of Dong communities in Guizhou, Guangxi, and Hunan, academic focus has predominantly been on Guizhou, often generalising its characteristics to represent regional styles universally. However, this overlooks the nuanced variations in musical style across different regions. This homogenisation risks fostering a monolithic view of pipa songs, marginalising the unique attributes of Guangxi and Hunan's music, and failing to reflect the diversity of practice. Additionally, there is a lack of discussion on human interactions in these songs. With regards to changing "ethnoscapes" (Appadurai, 1990) that refer to the myriad types of people—migrants, international traders and merchants, tourists, and others, that may be found in a particular location at different historical moments, these regional styles may have influenced each other to create new "hybridised" pipa songs. In short, a lack of research studies on these songs in their changing social-cultural context (Merriam, 1964).

Additionally, there is a notable lack of innovation and prevalent homogenisation

in research outputs. Existing studies often adopt a singular, musicological perspective, treating pipa songs as a library-like collection of records, scores, and performances. This approach lacks interdisciplinary innovation, omitting broader discussions on their cultural significance and reasons for persistence from perspectives such as anthropology or folklore. Additionally, research tends to follow a uniform pattern, broadly outlining it with limited in-depth analysis. Studies typically include a three-part format: an introduction to the pipa song's historical context, detailing its musical or performance characteristics, and considerations for its continued preservation and transmission.

Finally, research on pipa songs often overlooks the evolving dynamics of musical changes. While acknowledging distinctions between historical and contemporary practices, most studies attribute these changes solely to modernisation, neglecting other factors like politicisation. Furthermore, there is a lack of detailed discussion on the mechanisms and reasons behind these musical alterations.

In future research on Dong pipa songs, it is imperative that scholars not only broaden their investigative scope but also deepen their analytical rigour. This research could benefit from diverse perspectives and interdisciplinary collaboration, incorporating anthropology, folklore, and sociology. Methods include ethnographic interviews, comparative analysis, participant observation, and studying the socio-cultural impact of pipa songs. Advanced

technology, such as recording software and AI, can also aid in analysing musical details. Concurrently, researchers should focus on the nuanced factors influencing the preservation and evolution of pipa songs within society, ultimately contributing to a comprehensive and systematic body of knowledge about this musical tradition.

ACKNOWLEDGMENTS

The authors would like to thank the editors and anonymous reviewers for their insightful comments and constructive suggestions, which have greatly contributed to improving the quality of this paper.

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Review Article

Digital Competence of Students in Higher Education: A Systematic Review (2019-2023)

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ABSTRACT

The effective use of digital technology enables students to confidently navigate tasks in daily life, work, and academia. The growing prevalence of generative Artificial Intelligence (AI) tools underscores the urgent need for higher education institutions to enhance students' digital competence. This systematic review was conducted using the PRISMA method, 42 articles were selected from Scopus and Web of Science from 2019 to 2023, aiming to provide an overview of research trends on university students' digital competence. Through thematic analysis, this study revealed four key research themes: digital competence evaluation, relationship studies, comparative studies, and strategies for improvement. The onion framework of digital competence that emerged from this study effectively illustrates the progression from core to specialized competencies. The authors advocate that targeted intervention strategies are essential to effectively improving students' digital competence. It is recommended that universities embed digital competence into educational philosophy, adopt interdisciplinary approaches, and incorporate it into curriculum design to comprehensively enhance students' digital competence and support their career development.

Keywords: Digital competence, higher education, onion framework, systematic review, university students

ARTICLE INFO

Article history:

Received: 19 October 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.10>

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INTRODUCTION

The advancement of digital technologies, coupled with numerous studies, has emphasized the importance of digital competence. As an essential skill for current

and future citizens, digital competence is indispensable in the digital age (Ferrari, 2013). To navigate daily work, education, employment, and entertainment with greater confidence, a certain level of digital competence is essential for citizens (Saltos-Rivas et al., 2021). Recently, there has been a surge of interest in research on digital competence, particularly within the higher education sector. Researchers are increasingly focused on examining the digital competence of university students, aiming to enable them to capitalize on the opportunities offered by digitization.

Digital competence extends beyond the mere acquisition of technical knowledge or specific skills. It encompasses strategies and values essential for effective and ethical engagement with digital technology (Pais, Quiroz, & Carrasco-Manríquez, 2023). In the educational context, digital competence includes students' abilities to utilize technology to access and consume information. It also involves students' use of technology to process, acquire, and evaluate information. Furthermore, digital competence entails the capacity to use digital technology for creating and communicating information (Hatlevik & Christophersen, 2013). In this study, digital competence refers to the cognitive skills required to actively and creatively use ICT, emphasizing applying these skills in various scenarios to support lifelong learning and active digital citizenship.

Initially, many studies concentrated on defining concepts such as digital literacy, digital skills, and digital competence (Spante et al., 2018), recognizing these as distinct

but complementary concepts applicable in different contexts. In recent years, digital competence has gained increasing prominence in the education sector. During the COVID-19 pandemic, numerous studies focused on evaluating digital competence (Cerny, 2021; Zare et al., 2023) and exploring the relationships between digital competence and other variables (Heidari et al., 2021). The development of digital competence assessment frameworks has also emerged as a significant area of research, with many studies dedicated to creating and validating reliable and valid instruments (Saltos-Rivas et al., 2022). In higher education, scholars have primarily focused on the digital competence of students and teachers, with particular attention to students from diverse backgrounds (Zhao, Llorente, & Gómez, 2021). Recently, scholars have also investigated strategies for enhancing university students' digital competence. According to Mogas et al. (2023), students can get a lot better at using technology by using relevant digital resources like e-portfolios or mobile devices in teaching methods (Agila-Palacios et al., 2021).

Digital competence is intricately linked to students' academic pursuits and daily lives. Kim et al. (2018) discussed how acquiring digital competence can increase students' willingness to use technology. Those with higher levels of digital competence tend to experience greater success in digital learning environments (Bergdahl et al., 2020). This competence can directly or indirectly affect their academic engagement. During crises like the COVID-19 pandemic, universities that prioritize digital competence and

offer efficient, user-friendly platforms can significantly enhance students' academic engagement (Heidari et al., 2021). Moreover, students with strong digital competence can access critical information and services, perform online transactions, explore new technologies, and strengthen social relationships with friends and family. Digital competence also provides university students with more opportunities for career development or further academic pursuits (Vodă et al., 2022).

Between 2019 and 2023, numerous studies have explored digital competence among university students. However, there are limited systematic reviews on this topic. Existing systematic reviews have focused on definitions, theoretical frameworks, and research methodologies (Van Laar et al., 2017). While these studies have been confined to these three aspects, there has been no development in additional fields. Given this gap, re-examining the research on digital competence over the past five years and identifying new fields of study is significant for scholars. It can highlight evolving trends in research topics, identify the instruments used to evaluate digital competence and explore strategies for enhancing the digital competence of university students. Therefore, this systematic review aims to address the following three research questions by examining articles on the digital competence of university students published between 2019 and 2023.

1. What are the themes in research on digital competence among students in higher education?

2. What are the features of instruments used to evaluate students' digital competence in higher education?
3. What strategies are being implemented by higher education institutions to enhance students' digital competence?

METHODOLOGY

This systematic review is conducted by following the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) guidelines (Moher et al., 2010), focusing on the digital competence of university students from 2019 to 2023. A systematic review involves identifying, selecting, and critically appraising relevant research on a clearly defined topic using a systematic and explicit approach and subsequently collecting and analyzing data from previous studies. The rationale for selecting this methodology lies in its ability to facilitate an accurate and reliable synthesis of the literature. In this review, we systematically analyzed articles about the digital competence of university students. The article search was conducted using the PRISMA method, which ensures clarity and transparency in the reporting of the systematic review process.

Database Selections

In this systematic review, the Scopus and Web of Science databases were chosen to search for the required thematic articles. Scopus and Web of Science are recognized as primary databases for international interdisciplinary academic literature (Chadegani et al., 2013). To narrow the

search scope, the title must include “digital competence,” the topic must include “higher education,” “universities,” or “colleges,” and “students” or “learners” while excluding titles, abstracts, and keywords that contain “faculties,” “educators,” “teachers,” or “professors.” The search string for each selected database is as follows:

- TITLE (“digital competence”)
- AND TITLE-ABS-KEY (“higher education” OR universit*)
- AND TITLE-ABS-KEY (studen* OR learne*)
- AND NOT TITLE (facult* OR educato* OR teache* OR professo*)
- AND NOT ABS (facult* OR educato* OR teache* OR professo*)
- AND NOT KEY (facult* OR educato* OR teache* OR professo*)

Inclusion and Exclusion Criteria

The research selection process is iterative and incremental, divided into several stages, and involves different activities. The initial search results included 204 articles. To screen

for suitable studies, the following inclusion and exclusion criteria were established to select studies relevant to answering the research questions (Table 1). Initially, 204 articles were reviewed according to predefined inclusion and exclusion criteria, leading to the identification and removal of 23 duplicate articles. Additionally, 129 articles that did not meet the inclusion criteria were excluded. Experts then conducted further readings and quality reviews of the remaining 52 articles to ensure that the selected ones met the necessary standards to effectively address the research questions.

Quality Assessment

Articles that met all the inclusion criteria and did not match the exclusion criteria underwent a comprehensive review to ensure they met the specified quality standards. The selected articles were submitted to three experts for independent quality assessment. As noted by Chowdhury et al. (2024), spreadsheets are a convenient tool for classifying and analyzing data in biometric research and literature reviews. Therefore, the experts utilized Microsoft

Table 1
Inclusion and exclusion criteria

Inclusion Criteria	Exclusion Criteria
The participants were students who studied in higher education institutions.	The participants include primary, secondary, and high school students, as well as teachers and other faculty members working in higher education institutions.
Published between 2019 and 2023.	Not published between 2019 and 2023.
Peer-reviewed full-text research papers.	Not peer-reviewed full-text research papers.
Written in English.	Written in other languages.
Empirical studies.	Literature review, commentaries or meta-analysis paper.

Table 2
Quality assessment criteria

Questions of quality assessment criteria
1. Is the research topic related to the digital competence of university students?
2. Are the research objectives clearly defined?
3. Are the research questions or hypotheses specified?
4. Is the instrument clearly described and based on the design?
5. Is the study sample clearly described?
6. Are the research results adequately addressed in these studies?
7. Are the conclusions clearly described and based on the results?
8. Do the authors address the limitations of the study?
9. Are suggestions made for improving digital competence in higher education?
10. Are future research directions suggested?

Source: Zhao, Llorente, & Gómez (2021)

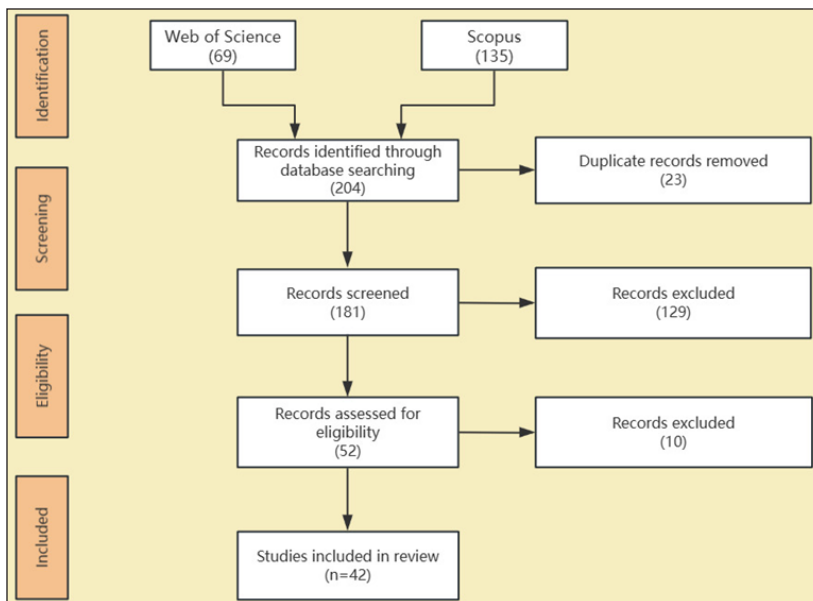


Figure 1. PRISMA flow of data extraction procedure

Excel spreadsheets to collect and organize data from the reviewed articles. The articles' quality assessment criteria include 10 questions that focus on the description of university students' digital competence, research objectives, research questions,

research design, research instruments, research sample, research conclusions, research limitations, recommendations for future development of students' digital competencies, and future research directions (Table 2). Each question is evaluated based

on the clarity, relevance, and specificity of the responses in each article. Each question has three possible answers coded “Yes” (1 point), “No” (0 points), and “Partially” (0.5 points). The experts evaluated the articles based on the 10 questions listed in the criteria (Table 2). To be included in the final selection, an article must receive a score of 7.5 or higher from all three experts, which is the threshold for the selection of the article (Zhao, Llorente, & Gómez, 2021).

Three experts spent a month evaluating the quality of the 52 articles. Finally, 42 articles were selected for analysis, allowing the research questions to be addressed. The data extraction process is illustrated using the PRISMA flow diagram (Moher et al., 2010) in Figure 1.

RESULTS

Research Themes on Digital Competence

In the selected 42 articles, an evident trend is the increasing depth and specificity of

research themes. These articles can be categorized into four primary themes: evaluating digital competence, relationship study, comparative study, and improving digital competence (Figure 2). Articles that focused on the evaluation of digital competence constitute the largest segment, representing 26%. This highlighted that the evaluation of students’ digital competence has remained a significant research theme over the past five years. Additionally, there is a clear trend of increasing relationship studies, with an increasing number of variables influencing digital competence being validated, such as self-efficacy, time management, career adaptability, computer safety, and self-organization. This highlights a growing trend toward a more comprehensive understanding of digital competence, compared to the findings of Zhao, Llorente, and Gómez (2021), which included only two variables: digital information learning and digital readiness.

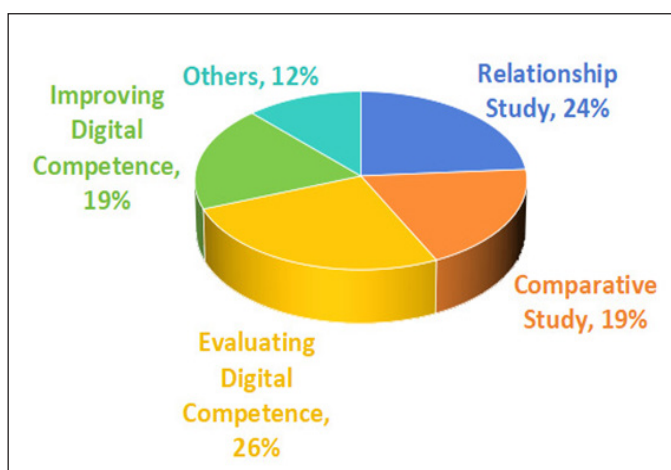


Figure 2. Different themes of research on students’ digital competence

Evaluating Digital Competence

Among the 42 selected articles, the evaluation of university students' digital competence is the most prevalent topic, with a total of 11 articles (Table 3). Four articles examined students' self-perceived digital competence, while the remaining seven evaluated it based on various respondent backgrounds. These backgrounds include non-technical students, communication program students, public administration students, law students, students with disabilities, physiotherapy students, and online learners. Over the past five years, the scope of evaluating digital competence among different types of university students has expanded, reflecting a trend toward greater diversity compared to previous periods.

Relationship Study

Ten articles explored the relationship between digital competence and other factors (Table 3). Four articles highlighted

the significance of digital informal learning, indicating a strong research focus on the interplay between it and digital competence. Two articles examined self-efficacy as one of the variables, discussing how digital competence correlates with students' learning efficiency. Other variables related to digital competence include time management, career adaptability, and factors from the Decomposed Theory of Planned Behavior (DTPB) model (He et al., 2020; Taylor & Todd, 1995), self-organization, the ability to learn, seek help, learn independently, and various learning approaches. It indicates that students' digital competence is interconnected with multiple variables, which collectively impact their academic performance (Wang et al., 2021).

Comparative Study

Eight articles conducted comparative analyses of digital competence under varying conditions (Table 3). Three of these studies focused on temporal comparisons,

Table 3
Different themes about digital competence

Themes	Sub-themes	References
Evaluating digital competence	General students' self-perceived digital competences	Guevara-Otero et al. (2023) Levi-Orta et al. (2020) Martzoukou et al. (2020) Zhao, Gómez, et al. (2021)
	Students study non-technical program	Tóth et al. (2022)
	Students in the communication program	Crawford-Visbal et al. (2020)
	Students in public administration	Budai et al. (2023)
	Students study in law-related courses	Martzoukou et al. (2022)
	Physiotherapy students	Røe et al. (2023)
	University students with disabilities	Cabero-Almenara, Gutiérrez-Castillo, Palacios-Rodríguez, & Guillén-Gámez (2023)
	Online learners	Vishnu et al. (2022)

Table 3 (continue)

Themes	Sub-themes	References
Relationship Study	The relationship between digital competence, digital informal learning, and academic engagement	Heidari et al. (2021)
	The relationship between digital competence, digital informal learning, and technology expectancy	He & Li (2019)
	The relationship between digital competence, digital informal learning, and DTPB factors	He et al. (2020)
	The relationship between digital competence, career adaptability, digital informal learning, and academic performance.	Zhou et al. (2023)
	The relationship between digital competence, time management, and self-efficacy	Galindo-Domínguez & Bezanilla (2021)
	The relationship between digital competence, computer anxiety, and self-efficacy	Katsarou (2021)
	The relationship between digital competences, self-organization, and independent learning abilities influences digital learning	Scheel et al. (2022)
	The relationship between digital competence, help-seeking, and learning agency influence university students' well-being during the pandemic by reducing cognitive load and burnout	Wang et al. (2021)
	The relationship between digital competence on perceived stress, burnout, and well-being	Kumpikaitė-Valiūnienė et al. (2021)
	The relationship between digital competence and different learning approaches	Niu et al. (2022)
Comparative Study	Different time frame: 2018–2020	Cerny (2021)
	Different time frame: during the COVID-19	Zare et al. (2023)
	Different time frame: before and during the COVID-19 pandemic	Burgos et al. (2023)
	Different countries: Belgium and Romania	Vodă et al. (2022)
	Different countries: Spain and Latin America	Pérez-Escoda et al. (2021)
	Different countries: Italy and Spain	López-Meneses et al. (2020)
	Different schools: university students from technical-vocational secondary education (TVSE) and scientific-humanistic secondary education (SHSE)	Pais, Véliz-Campos, & Quiroz (2023)
	Different competence: students have had to repeat a year or not	Cabero-Almenara, Gutiérrez-Castillo, Guillén-Gámez, & Gaete-Bravo (2023)
Improving digital competence	E-portfolios	Mogas et al. (2023)
	Electronic resource “Oracle”	Tolmachev et al. (2022)
	Digital tools	Araújo-Vila et al. (2020) Baranovska et al. (2023)
	Digital tools and social networks	Rodríguez-Moreno et al. (2021)

Table 3 (continue)

Themes	Sub-themes	References
	Gamification teaching method	Humeniuk et al. (2022)
	Project-Based Learning (PBL), Case-Based Learning (CBL)	Agila-Palacios et al. (2021)
	Blended learning course	Sánchez et al. (2022)
Other Studies	Digital safety competences	Pais, Quiroz, & Carrasco-Manríquez (2023)
	Environmental protection	Amador-Alarcón et al. (2022)
	The internet used to classify digital competence	Martinez-Lopez et al. (2020)
	Identify latent classes among university students based on their digital competence levels	Burgos-Videla et al. (2021)
	Instrument of SDiCoS	Tzafilkou et al. (2022)

specifically utilizing the COVID-19 pandemic as a critical segmentation point. Another three studies compared the digital competence of university students across different countries, thus employing macro-level conditions as the research premise. Additionally, two studies examined micro-level conditions, such as the differences in digital competence among first-year university students from diverse secondary education backgrounds and the impact of academic year repetition on digital competence. Over the past five years, comparative studies of university students' digital competence have explored both macro and micro-level factors, with a pronounced emphasis on macro-level conditions. This trend highlighted the significance of broader contextual factors in understanding and evaluating digital competence among university students.

Improving Digital Competence

Eight articles have discussed the use of various teaching resources and methods

to enhance the digital competence of university students (Table 3). Five studies have explored the impact of different digital resources, such as e-portfolios, electronic resources "Oracle," digital tools, and social networks, on improving students' digital competence. Three studies have highlighted the effectiveness of targeted teaching methods, including gamification, project-based learning, case-based learning, and blended learning courses, in enhancing digital competence. Since the onset of COVID-19, there has been increased attention from researchers on improving students' digital competence.

Other Studies

A small number of articles address various specialized research topics (Table 3). Two articles focus on sub-digital competence, such as digital safety competence and environmental protection. Over the past five years, research on students' digital competences has increasingly focused on specific competence areas, reflecting a trend

towards more in-depth analysis of aspects of digital competence.

Two articles categorized university students based on their levels of digital competence, one into three categories and the other into four categories. The researchers recommended developing tailored training programs to enhance digital competence for students at different levels (Burgos-Videla et al., 2021).

Another article developed a digital competence assessment instrument specifically for university students (Tzafilkou et al., 2022). An analysis of 42 articles revealed that 15 of these studies employed instruments designed to assess the digital competence of university students, all of which were developed before 2019. Over the past five years, researchers have paid limited attention to the development of

new digital competence instruments tailored for university students.

The Features of the Digital Competence Instrument

The selection criteria mandated empirical studies and a comprehensive reasoning process, leading to the evaluation of university students' digital competence in all 42 articles. Most of the articles used digital competence assessment tools as their main idea, and they looked at different aspects of digital competence (Figure 3). Approximately 12% (n = 5) of the studies did not explicitly state the evaluation dimensions. Instead, the studies provided questions only. Additionally, researchers typically classify about 5% (n = 2) of the studies as having a single dimension, as they concentrate on a specific subdomain

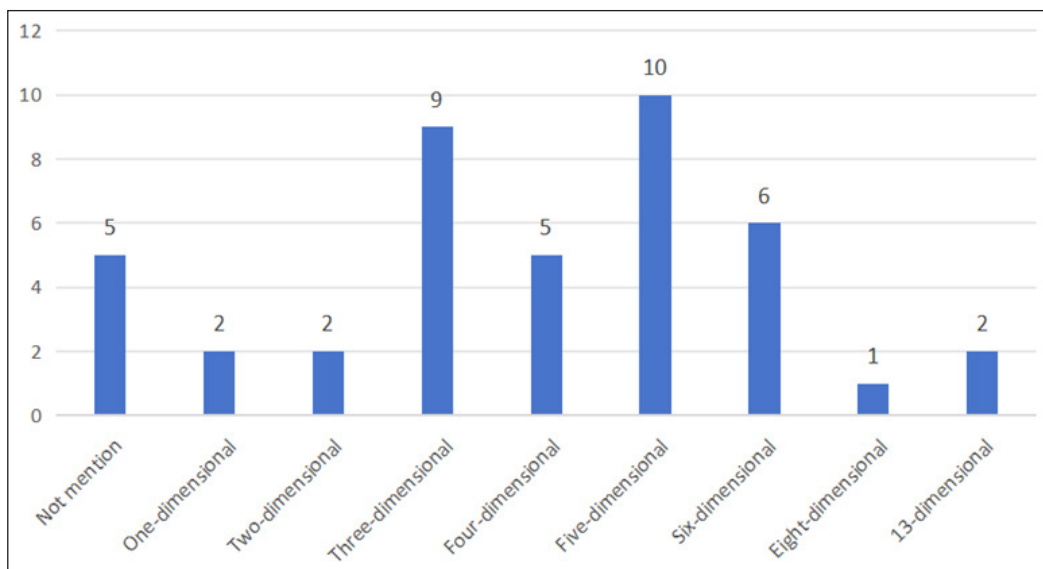


Figure 3. Instruments with different dimensions

of digital competence. Furthermore, three studies integrated different digital competence assessment frameworks from previous research, resulting in instruments with as many as eight or 13 dimensions. The five-dimensional instrument is the most used, appearing in about 24% (n=10) of the studies. Overall, the instruments primarily concentrated on three to six dimensions. These instruments exhibit both similarities and differences in their content across the various dimensions (Appendix 1).

Common Features

The DigComp Framework, developed by the European Union, emerged as the most frequently cited instrument, explicitly mentioned in 17 studies, including six mixed studies and one qualitative study. However, it is to be noted that the dimensions of the instrument were often modified. The DigComp Framework provided a unified vision of the necessary skills for addressing various aspects of digital challenges. Its objective is to establish a common language applicable to diverse tasks, including policymaking, goal-setting, planning, evaluating, and monitoring education (Pais, Quiroz, & Carrasco-Manríquez, 2023). "University students' Basic 2.0 Digital Competence" (COBADI) Framework, which is registered in Spain, is also frequently cited and explicitly mentioned in five studies, including a mixed study. COBADI primarily measures the digital competence of information search, management, and communication in the perceptible Web 2.0 (Martinez-Lopez et al.,

2020). Additionally, some studies referenced specialized evaluation instruments tailored to the themes of the articles and the characteristics of the research subjects. Some of the tools that were used to look at informal learning were the Technological Skills (TS), Cognitive Skills (CS), and Ethical Knowledge (EK) questionnaires (Heidari et al., 2021). The Digital Literacy Questionnaire for Language Learners (DLQ-LL) was used to test language learners' digital skills (Katsarou, 2021), and the Digital Competence Profiler (DCP) was used to test online learning (Kumpikaitė-Valiūnienė et al., 2021).

The most common dimensions used to measure university students' digital competence in the 42 articles were information and data literacy, communication, and collaboration (Appendix 1). This shows that these skills are seen as the basis of digital competence (Guevara-Otero et al., 2023). Digital content creation also emerged as a critical dimension, consistently appearing across multiple frameworks, reflecting the importance of skills in creating and managing digital content (Crawford-Visbal et al., 2020). The emphasis on technological skills and cognitive skills within these multidimensional frameworks suggests that both technical proficiency and cognitive abilities are essential in navigating the digital environment. These skills are often integrated with information processing and problem-solving competence, forming a comprehensive approach to understanding and applying digital technology (He & Li, 2019). Additionally, security and ethical

knowledge were prominently featured, particularly in more advanced frameworks, highlighting the critical importance of safe practices and ethical behavior within digital contexts (He et al., 2020; Røe et al., 2023). The fact that educational and learning-related parts are included, like ICT used in university learning (Burgos-Videla et al., 2021), digital literacy tests (Katsarou, 2021), and educational parts (Humeniuk et al., 2022), shows how important it is to improve digital competence in school settings.

Differences and Unique Features

Firstly, it is important to highlight the variation in the number of dimensions across frameworks, ranging from a single dimension to as many as thirteen. This variation indicates differing levels of depth and complexity in how digital competence is conceptualized and understood across studies and frameworks. Frameworks with fewer dimensions generally concentrate on core competence, while those with more dimensions encompass a broader and more detailed spectrum of skills and knowledge areas.

Secondly, there is a differential emphasis on specific competence. Higher dimensions more frequently highlight skills like critical thinking, problem-solving, and creativity, indicating their integral role in advanced levels of digital competence. Additionally, some instruments introduce specialized skills, such as digital innovation and digital citizenship, which are absent in lower-dimensional frameworks. The fact that attitudes toward ICT tools are

included in digital competence measures shows the importance of this dimension. This is especially true for more complex instruments. These elements are critical as they influence an individual's acceptance and effective use of technology (Tóth et al., 2022; Zhao, Gómez, et al., 2021).

Thirdly, interdisciplinary and personalized development is a distinctive feature of higher dimensions. These instruments often incorporate personal development components and interdisciplinary elements, such as the integration of education and engineering (Humeniuk et al., 2022), emphasizing that digital competence extends beyond technical skills to include the holistic development of individuals across various disciplines and contexts (Martzoukou et al., 2022; Tolmachev et al., 2022).

Strategies to Enhance Students' Digital Competence

There are eight of the 42 selected articles focused on various methods for enhancing students' digital competence (Table 3). Five articles explored the application of digital resources, while three implemented targeted teaching methods to improve digital competence. In the discussion sections of some articles, it was suggested that establishing digital skills courses, such as ICT courses, is the most efficient way to enhance students' digital competence (Agila-Palacios et al., 2021; Burgos-Videla et al., 2021). However, it is also noted that digital skill courses alone are insufficient. A comprehensive digital reform of the entire academic program is necessary,

integrating programming and algorithmic thinking throughout the curriculum to foster enduring competencies (Cerny, 2021). While some articles emphasized the importance of enhancing the digital competence of university students, they did not specify methods. Others explicitly stated that improving university students' digital competence should be a focus of future research (Martzoukou et al., 2022; Zhou et al., 2023).

Digital Resources

The selected articles indicated that enhancing university students' digital competence can be effectively achieved using various digital resources and tools. For instance, the use of e-portfolio evaluations has been shown to facilitate the development of digital and autonomous skills, thereby enriching the overall learning process (Mogas et al., 2023). Tolmachev et al. (2022) employed an Information Digital Resource (IDR) model to demonstrate that the electronic resource "Oracle" effectively supports the development of digital competence among business school students. Similarly, Baranovska et al. (2023), through instructional experiments, showed that the integration of digital tools within a holistic pedagogical approach significantly enhances the digital competence of future philologists. Additionally, the effective use of social networking platforms can improve students' communication and collaboration skills within digital environments (Rodríguez-Moreno et al., 2021).

Targeted Teaching Methods

Three studies have recommended the implementation of targeted teaching methods to enhance students' digital competence. Humeniuk et al. (2022) pointed out that using the Gamification of Learning theory in schools can get students more involved and help them learn how to use technology well. Similarly, Sánchez et al. (2022) reported that the blended learning method effectively improves students' digital competence by requiring them to interact with various digital resources and tools throughout the learning process, thereby enhancing their digital competence. Agila-Palacios et al. (2021) investigated Problem-Based learning (PBL) and Case-Based learning (CBL) as ways to teach and compare how they affected students' digital competence by redesigning the course. This comparison demonstrated that redesigning existing pedagogical methods is a prevalent strategy for advancing the digital competence of university students.

DISCUSSION

This systematic review examines the research themes, features of instruments, and strategies for improving the digital competence of university students over the last five years. Since 2013, digital competence has witnessed a significant surge in academic interest (Spante et al., 2018). Scholars from various countries have examined digital competence from diverse perspectives, covering a wide range of topics. Before 2017, a significant number of studies focused on digital competence

definition (Van Laar et al., 2017). However, the advent of the COVID-19 pandemic in 2019 and the subsequent shift toward online learning have underscored the critical importance of digital competence, particularly in its impact on students' academic performance when interacting with other variables (Kumpikaitė-Valiūnienė et al., 2021). During the pandemic, students were exposed to more informal learning scenarios, making digital competence a key factor in the effectiveness of informal learning, which aligns with the findings of He and Li (2019). Another emerging trend is the growing intersection between digital competence and career development. With the widespread integration of digital technology across various industries, digital competence has become a critical factor in personal career advancement (Zhou et al., 2023). Consequently, university students must prioritize the enhancement of their digital competence as part of their career planning. This focus enables them to adapt to the rapidly evolving demands of the job market and capitalize on emerging career opportunities (Baranovska et al., 2023).

The evaluation of university students' digital competence has emerged as a key research focus over the past five years. Academic background has been identified as a primary determinant of the disparities in digital competence among students. Specifically, differences in educational backgrounds contribute to varying levels of digital competence, with first-year students from Scientific-Humanistic Secondary Education (SHSE) exhibiting

higher digital competence compared to Technical-Vocational Secondary Education (TVSE; Pais, Véliz-Campos, & Quiroz, 2023). Additionally, students' disciplinary fields significantly influence their digital competence. For instance, students pursuing technical degrees often had greater exposure to technological literacy, aligning with the findings of Sánchez-Caballé et al. (2021). Conversely, students in non-technical fields, such as law, have been reported to possess digital innovation skills at a more basic level (Martzoukou et al., 2022). Furthermore, access to digital resources is a critical factor affecting the level of digital competence among students. Students who attend universities equipped with advanced digital facilities or that offer diverse digital courses tend to demonstrate greater efficiency in their studies. This observation is consistent with He et al. (2020).

Currently, university students exhibit a high level of awareness regarding their technical skills, particularly in the use of digital tools for information retrieval and communication. However, their awareness of digital content creation, digital security, and problem-solving remains relatively underdeveloped (Budai et al., 2023; Guevara-Otero et al., 2023). On a positive note, students have demonstrated a strong awareness of the environmental implications associated with the use of various digital devices. Amador-Alarcón et al. (2022) emphasized the necessity of adopting effective measures and attitudes to fully and optimally engage with the digital environment. Consequently, it

is imperative to implement effective strategies for managing electronic waste while leveraging digital tools to promote sustainable development (Amador-Alarcón et al., 2022).

Evaluating students' digital competence necessitates the use of specialized digital assessment instruments. Among the 42 selected empirical research studies, a variety of instruments were employed. The findings indicated that the scope of digital competence extends far beyond the traditional concept of digital literacy. The onion framework for digital competence in this paper was modified from Saunders' framework (Saunders et al., 2019). This framework (Figure 4) illustrates the progressive relationship between core competence and specialized competence within digital competence. As the levels

progress from the innermost to the outermost layers, the complexity and specialization of these competences increase incrementally.

The onion framework of digital competence places information and data literacy, communication, and collaboration at its core, symbolizing their fundamental role in digital competence (Guevara-Otero et al., 2023). These competences were most frequently discussed in the 42 articles reviewed (Figure 4). In academic settings, students must first develop strong information and data literacy to effectively collect and analyze information. Subsequently, they must leverage communication and collaboration to share this information with team members and engage in meaningful collaborative discussions (Burgos et al., 2023). Digital content creation, problem solving, and security are in the second

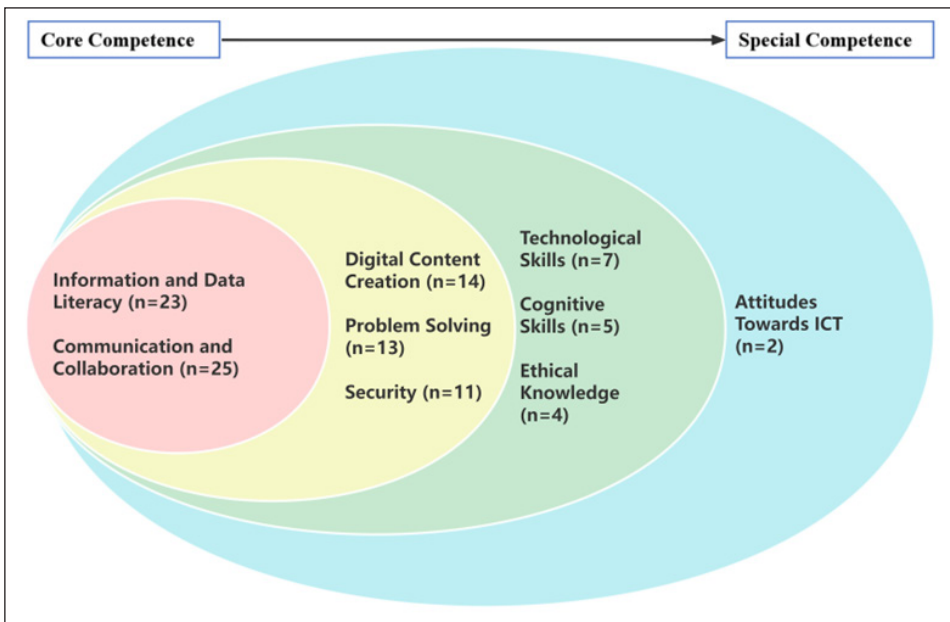


Figure 4. Onion framework of digital competence (Source: Adapted from Saunders et al., 2019)

layer, suggesting that once basic digital competencies are established, students can advance these skills. Technological skills, cognitive skills, and ethical knowledge are in the third layer, indicating that a higher level of technical and cognitive ability is needed for creating high-quality digital content (He et al., 2020). The placement of security and ethical knowledge across layers emphasizes the importance of safe practices and ethical behavior in digital environments. These competencies often require advanced skills and sensitivity for effective navigation. In digital environments, students need technological skills to protect personal data and ethical knowledge to ensure their actions align with moral standards (Budai et al., 2023). Attitudes towards ICTs are in the outermost layer, suggesting that individuals' attitudes towards digital technologies influence their use and development of these competences. A student's attitude towards ICT tools affects their frequency and effectiveness in using them. Students who are open to and positive about new technologies are more likely to actively learn and acquire new skills, continually enhancing their digital competence (Tóth et al., 2022). Digital competence has become a multidimensional concept, with these dimensions collectively forming essential components of 21st-century skills (Van Laar et al., 2017).

Enhancing the digital competence of university students can be achieved through various approaches, with the utilization of digital resources being one of the most frequently cited methods. These resources

encompass a wide array of digital tools and platforms, including digital learning. Mastery of these tools and platforms can significantly bolster students' digital skills, as they offer abundant learning and practical opportunities that enable students to acquire and refine digital competence in practical contexts (Araújo-Vila et al., 2020; Tolmachev et al., 2022). Through these platforms, students can access up-to-date knowledge and technologies, conduct self-assessments, and engage in interactive learning experiences. This not only enhances their digital competence but also fosters independent learning abilities and self-organization skills within the digital environment (Scheel et al., 2022). The adoption of innovative teaching methods is another crucial aspect of current curriculum reforms in higher education aimed at enhancing students' digital competence. Methods such as gamification and blended learning emphasize active student participation and practical application (Humeniuk et al., 2022; Sánchez et al., 2022). These pedagogical methods encourage students to apply digital skills in real-world scenarios, thereby enhancing their overall digital competence.

Providing specialized digital courses is a direct and effective strategy for improving the digital competence of university students (Cerny, 2021). Such courses may cover a range of topics, including basic computer operations, internet security, data processing, advanced programming, artificial intelligence, and data analysis. However, while these specialized courses

are beneficial, it is essential to integrate digital competence into various academic disciplines and courses (Galindo-Domínguez & Bezanilla, 2021). This integration enables students to comprehend and apply digital technologies within diverse disciplinary contexts. Moreover, as noted by Burgos-Videla et al. (2021), higher education institutions should develop tailored training programs based on the varying levels of students' digital proficiency. This differentiated instructional approach enhances students' digital competence by providing foundational training for those with lower levels of competence and advanced courses for those with higher levels. These personalized programs ensure that all students achieve the maximum possible improvement in their digital competencies.

CONCLUSION

In the digital age, digital competence is essential for both personal and professional development, extending beyond technical staff to become a critical skill for everyone. This is particularly evident in higher education, where students' digital competence significantly influences their academic performance and future career prospects (Zhou et al., 2023). This systematic review aimed to assess the research on university students' digital competence from 2019 to 2023. Using the PRISMA method, 42 articles were selected from Scopus and Web of Science databases, based on specific inclusion and exclusion criteria, to address three key research questions. First, the

research themes on digital competence have diversified, including digital competence evaluation, relationship study, comparative study, and strategies for improvement. Second, various instruments were used to evaluate digital competence, with both commonalities and differences among them. Third, the most common strategies to enhance digital competence involve the use of digital resources and the development of targeted teaching methods. Overall, research on university students' digital competence has gained significant attention over the past five years, driven by the COVID-19 pandemic and ongoing technological advancements. Future research should focus on holistic approaches, integrating digital competence into broader educational frameworks and practices.

Implications of the Study

Implications for Practice

This systematic review offers a comprehensive analysis of research on university students' digital competence. The findings highlighted the growing importance of digital competence in higher education. By examining 42 articles, this review provides valuable insights into the strengths and weaknesses of students' digital competence, serving as a benchmark for educators, policymakers, and researchers. These insights are crucial for informing educational policy, curriculum design, and targeted teaching interventions, ensuring effective resource allocation and improved digital competence among students.

The study of digital competence assessment instruments enables scholars to gain deeper insights into their underlying content and methodologies, providing a solid foundation for selecting the most appropriate tools. The evaluation outcomes from these instruments revealed which educational practices and curriculum content are most effective in enhancing students' digital competence. These findings informed the optimization of curriculum design and instructional strategies, aligning them more closely with students' learning needs and the evolving demands of the labor market. A comprehensive understanding of these instruments allows educators to accurately identify the specific competencies measured by each instrument and ensure that all essential dimensions are thoroughly assessed. Furthermore, recognizing the distinctions among various instruments enables educators to select the most suitable assessment framework based on their educational context and pedagogical objectives.

Implications for Theory

Recent studies over the past five years have revealed that the DigComp and COBADI frameworks are the most used tools for assessing digital competence. The original DigComp framework comprises five dimensions and 21 indicators. However, many studies have extended this framework by adding new dimensions, thereby broadening the scope of digital competence and advancing theoretical developments in its assessment. Similarly, the COBADI

framework, initially structured with three dimensions, has been expanded to four in subsequent research, offering new insights into digital competence frameworks. A review of 42 studies highlights that the dimensions of digital competence have evolved to become more precise and comprehensive. The use of these modified assessment tools allows for a more accurate evaluation of university students' digital competence levels.

Limitations

This systematic review is limited to research on the digital competence of university students from 2019 to 2023. The focus was specifically on the term "digital competence", excluding related terms like "digital literacy" and "digital skills". This choice reflects the terminology commonly used in European contexts, where "digital competence" is prevalent (Zhao, Llorente, & Gómez, 2021). As a result, many selected articles feature European authors, though this should not imply that other regions disregard the importance of digital competence. It simply reflects regional research trends.

The review exclusively examined the digital competence of university students, deliberately excluding studies on teachers and other groups. However, the digital competence of university teachers significantly impacts students, making it a vital area for future research. Additionally, this review does not cover the digital competence of middle or primary school students, despite its potential influence on their future academic opportunities.

Understanding the digital competence of middle school students is crucial, as it plays a key role in their educational pathways and success.

Recommendations for Future Research

Despite extensive research on digital competence and its relationships with various variables over the past five years, further exploration is needed to uncover additional variables that could deepen our understanding of these connections. While many studies have assessed students' digital competence, the dimensions used are often broad and general. Few studies have explored specific aspects, such as digital competence related to environmental protection. Future research should focus on these sub-dimensions to accurately evaluate competence levels in particular areas, offering more detailed insights and a comprehensive understanding of digital competence in various contexts. The onion framework of digital competence can serve as a valuable tool for future researchers by providing a comprehensive and precise perspective on the layered structure of digital competence, ranging from core competence to specialized competence.

Moreover, there is a relative scarcity of research on strategies to enhance university students' digital competence. Although many studies acknowledge the importance of improving digital competence, they often lack comprehensive solutions. Some studies have used qualitative methods to examine the impact of digital resources and innovative teaching methods, but

these approaches alone are insufficient. Future research should integrate digital competence into teaching concepts, projects, and curricula within higher education. This holistic approach is essential for effectively enhancing students' digital competence, ensuring they are well-prepared to meet the demands of the digital age.

ACKNOWLEDGEMENT

This work was supported by the UCSI University and Universiti Pendidikan Sultan Idris. The authors would like to thank the reviewers for all the useful and helpful comments to improve the manuscript.

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APPENDIX 1

Different dimensions of selected instruments

Types	Dimensions	References
One dimension	<ul style="list-style-type: none"> • Communication and collaboration • Safety Area 	AgilaPalacios et al. (2021) Pais, Quiroz, & CarrascoManríquez (2023)
Two dimensions	<ul style="list-style-type: none"> • ICT knowledge and usage for social communication and collaborative learning • ICT for information search and processing • Use of digital tools as part of university learning • Use of consumer, learning and visualization technologies as part of university learning 	GuevaraOtero et al. (2023) AraújoVila et al. (2020)
Three dimensions	<ul style="list-style-type: none"> • Technological skills (TS) • Cognitive skills (CS) • Ethical knowledge (EK) • Competence in the use of ICT for the search and management of information • Competence in the use of ICT in social communication • The university's virtual tools and social communication • Office technology • Communication • Extension of informatics tools • Information and data literacy • Communication and collaboration • Digital content creation • Social DC • Informational DC • Epistemological DC 	Heidari et al. (2021) He et al. (2020) He & Li (2019) Sánchez et al. (2022) MartínezLopez et al. (2020) LópezMeneses et al. (2020) Zare et al. (2023) CrawfordVisbal et al. (2020) KumpikaitėValiūnienė et al. (2021)
Four dimensions	<ul style="list-style-type: none"> • Competences in knowledge and use of ICT in social communication and collaborative working • Competences in knowledge and use of ICT for information search and processing • Interpersonal competences in the use of ICT in the university context • Virtual and social communication tools are used in the University 	Burgos et al. (2023) BurgosVidela et al. (2021)

	<ul style="list-style-type: none"> • Subject pedagogical element of the digital component • Engineering and computer competencies • Common User component of ICT competence • General pedagogical component of ICT competence 	Humeniuk et al. (2022)
	<ul style="list-style-type: none"> • Motivational value component (MVC) • Cognitive component (CC) • Activity component (AC) • Personality development component (PDC) 	Tolmachev et al. (2022)
	<ul style="list-style-type: none"> • Computing and digital skills • Use of digital technologies • Digital literacy test • Factors affecting the use of digital technologies for language learning 	Katsarou (2021)
Five dimensions	<ul style="list-style-type: none"> • Information and data literacy • Communication and Collaboration • Digital content creation • Security • Problem solving 	Galindo Domínguez & Bezanilla (2021) Pérez Escoda et al. (2021) Cerny (2021) Vishnu et al. (2022) Zhou et al. (2023) Pais, Véliz Campos, & Quiroz (2023) Røe et al. (2023) Budai et al. (2023)
	<ul style="list-style-type: none"> • Availability of technical equipment • Attitude towards the use of digital technologies • Level of technical skill • Ability to concentrate and multitask in education • Learning materials 	Tóth et al. (2022)
	<ul style="list-style-type: none"> • Availability of ICT resources • Potential for digital competence • ICT and digital related training • Self perception in digital competence • Attitude towards ICTs 	Zhao, Gómez, et al. (2021)
Six dimensions	<ul style="list-style-type: none"> • Communication and collaboration digital skills • Creative digital skills • Critical digital skills • Information digital skills • Problem solving digital skills • Technical digital skills 	Vodá et al. (2022)

	<ul style="list-style-type: none"> • Technological literacy • Search and information processing • Critical thinking, problemsolving and decision making • Communication and collaboration • Digital citizenship • Innovation and creativity • Search, find, access (SFA) • Develop, apply, modify (DAM) • Communicate, collaborate, share (CCS) • Store, manage, delete (SMD) • Evaluate (EV) • Protect (PR) • Information and data literacy • Communication and collaboration • Digital content creation adopted • Safety and security adopted • Problemsolving • Analyzing and reflecting 	<p>CaberoAlmenara, GutiérrezCastillo, GuillénGámez, & GaeteBravo (2023)</p> <p>CaberoAlmenara, GutiérrezCastillo, PalaciosRodríguez, & GuillénGámez (2023)</p> <p>RodríguezMoreno et al. (2021)</p> <p>Tzafilkou et al. (2022)</p> <p>Scheel et al. (2022)</p>
Eight dimensions	<ul style="list-style-type: none"> • Information and data literacy • Communication and collaboration • Digital content creation • Safety • Solving problems • Critical attitude • Development of digital competence • Selfperception measuring the relevance of promoting digital competence 	<p>Mogas et al. (2023)</p>
13 dimensions	<ul style="list-style-type: none"> • Everyday participation as a digital citizen • ICT proficiency in completing different task • ICT productivity • Information identification in different contexts • Information literacy skills • Digital creation skills • Digital research skills • Digital communication skills • Digital innovation • Digital learning and development • Digital abilities to complete academic work • Digital identity management • Digital wellbeing 	<p>Martzoukou et al. (2020)</p> <p>Martzoukou et al. (2022)</p>

Translanguaging Practices in Speaking Skills in Tamil Classes at National Primary Schools: A Case Study in Malaysia

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ABSTRACT

Translanguaging strategies in the classroom should be established within the Malaysian educational framework, as integrating languages familiar to students enhances their learning process in Malaysian national primary schools, where the medium of instruction is Malay, Indian students taking Tamil classes find learning the language challenging because it is taught in Tamil, which is often not their first language. Translanguaging practices in the Tamil classroom will be useful as they will enhance students' understanding and make them better speakers of the Tamil language. Hence, the current study aims to identify the language functions of speaking skills and examine the effectiveness of translanguaging in Tamil classes at national primary schools. The study was guided by Tough's (1976) framework of language functions for school children and Baker's (2011) study on the effectiveness of translanguaging. A qualitative approach was employed, and the data were collected through classroom audio recordings and semi-structured interviews. The findings showed that the predicting, reporting, and reasoning language functions occurred most frequently in speaking skills, primarily through translanguaging between Tamil and English. Furthermore, the findings indicated that translanguaging benefited students who were not fluent in Tamil to be actively involved in the lesson. The current findings are useful to the Ministry of Education Malaysia in carrying out improvements in areas of training teachers to teach bilingual and multilingual students. Furthermore, the findings can help introduce modules with explanations that could enhance Tamil learning in national primary schools.

Keywords: Bilingual, formal Tamil, language functions, multilingual, translanguaging

ARTICLE INFO

Article history:

Received: 13 July 2024

Accepted: 05 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.11>

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INTRODUCTION

Translanguaging is an innovative approach that can enhance students' learning. This method encourages students to utilise their strongest language skills to grasp complex concepts more effectively and accelerate their overall learning process

(García, 2021). As such, it is pertinent that translanguaging is recognised and used by Malaysian students in classrooms. In Malaysian national schools, where the Malay language is the medium of instruction, the Ministry of Education introduced Tamil and Mandarin languages as additional subjects at national primary schools in 2008. Although most Indian students opt for the Tamil language, they encounter difficulties learning it due to insufficient proficiency in Tamil, which has led to low competence in formal Tamil speaking skills. It should be noted that Tamil is not the first language of many Indian students who grew up in either English, Telugu, Malayalam or Punjabi speaking households as their first language. This is supported by Peng's (2019) study, which states that Indian students faced significant difficulties in speaking Tamil and preferred speaking English due to being trained in English during the first language acquisition phase. In contemporary Indian society, it is increasingly common for parents to prioritise teaching English at home to their children rather than fostering proficiency in their native language. This trend underscores the growth attributed to second language acquisition, which may unintentionally hinder the children's ability to communicate effectively in Tamil. Gill (2013) pointed out that Tamil speakers, as a minority group, often pay less attention to consistently using the Tamil language and show an interest in developing proficiency in another language.

In addition, Muthusamy (2006) emphasised that the choice of mother tongue languages could vary depending on the family

background, regional origin, and personal preference. Thus, the limited exposure to Tamil in the home environment poses a challenge for Indian students, hindering their ability to speak the language fluently. As a result, students tend to communicate in a fragmented manner, which impacts their language proficiency. Apart from this, the limited use of Tamil leads to a lack of vocabulary and difficulties with pronunciation (Remoshan, 2021). As a result, students unconsciously apply translanguaging strategies to speak and learn Tamil to facilitate a higher understanding of the language in schools. Much of the existing research on translanguaging in the Malaysian education system focuses on broader contexts, with an oversight on the Tamil language acquisition among Indian students studying in national primary schools, who may navigate multiple languages, including Malay, English, and their mother tongue. Baker (2011) explicated that translanguaging is a linguistic term which refers to the dynamic and fluid utilisation of multiple languages by bilingual or multilingual individuals or communities to comprehend a language with low proficiency. Therefore, this article will show that incorporating translanguaging practices in the Tamil language classroom at Malaysian primary national schools is necessary as it allows students to grasp the lesson and engage in learning without facing language barriers.

LITERATURE REVIEW

Translanguaging is a Welsh term coined from "tawsieithu" by Cen William in 1996.

The term refers to a pedagogical practice of alternating between English and Welsh to manage bilingualism in Welsh schools. The term ‘tawsieithu’ was translated into English as translanguaging (Baker, 2011), defined as a meaning-making process that shapes experiences and gains understanding and knowledge using two languages. Subsequently, the term was extended to other multilingual language practices. Translanguaging occurs in various contexts, including education, literature, media, and daily communication. It is a linguistic practice that involves the flexible and seamless usage of multiple languages by individuals or communities (Yuvayapan, 2019). Translanguaging promotes the usage of students’ entire linguistic abilities to support personal learning in different languages. The advocacy acknowledges and values the diverse language backgrounds of students, which fosters inclusive and effective learning environments. Canagarajah (2011) articulates the concept of translanguaging as the capacity of multilingual speakers to navigate between languages, treating their diverse linguistic resources as an integrated system. This definition highlights not only the practice of using different linguistic features from multiple languages but also the intentional and systematic use of languages within specific language teaching contexts. Moreover, Wei (2011) expressed a broader view of translanguaging, believing that translanguaging includes a variety of linguistic performances for a wide range of purposes. Creese and Blackledge (2010) further extended this, stating that

translanguaging involves cultivating languages through use rather than just accepting or tolerating the learner’s original tongue.

According to Cenoz and Gorter (2021), translanguaging has become widely accepted in the literature on bilingual and multilingual education. However, Canagarajah (2021) stated that translanguaging practices in the classroom have not been developed to the same extent and remain underdeveloped at the pedagogical level. In their research, García and Kano (2014) found that translanguaging was utilised by bilingual and multilingual students with difficulties in employing a specific language to learn. On the other hand, Omidire and Sameera (2020) highlighted that students should be exposed to different languages to improve their less proficient language. Specifically, South African students experienced challenges in learning English at school. Omidire and Sameera’s (2020) study showed that these students employed their mother tongue languages, such as Sepedi and isiZulu, in the classrooms to learn English.

Kwon (2022) asserted that translanguaging frequently occurs in classrooms when bilingual and multilingual students are not proficient in a specific language. These bilingual and multilingual students generally utilise different linguistic features from multiple languages to communicate with peers in a conversation (García & Wei, 2014). Translanguaging not only helps enhance language subjects but also aids understanding in other subjects. Karlsson et al. (2018) demonstrated that

bilingual and multilingual students tended to employ all available resources in learning. Their findings revealed that primary school pupils learned science in both their mother tongue and a second language, namely Swedish and Arabic. Tan et al. (2012) underscored that translanguaging provided students with more opportunities to participate in science education, which positively impacted the learning environment and became co-constructors of the students' learning. They emphasised that translanguaging practices in science classrooms helped students develop their skills. Hence, translanguaging practices have been proven to be effective in the learning process.

The benefits of the translanguaging approach can enhance students' speaking skills, which is crucial for their success in school. Brown (2001) stipulated speaking skills as a benchmark for successful mastery of a language. Students are required to speak regularly and possess a solid understanding of grammar to effectively communicate in multiple languages and improve their language abilities. The existing literature demonstrates that speaking skills are a crucial component of the language curriculum (Luoma, 2004). Learning multiple languages allows students to employ language skills in various ways, which helps improve speaking skills. Bailey (2005) delineated that speaking skills are an effective approach to presenting opinions, ideas, personal needs, or feelings. Students with high listening skills will exhibit more effective speaking skills. In addition,

Rajendram (2021) revealed that students could continue employing their mother tongue language despite being required to solely speak English in classrooms. Students could speak in their native dialects with peers during group work. Subhan (2017) also demonstrated that Malay students employed English to learn Malay at a Singapore primary school, as students in Singapore were more proficient in speaking English compared to Malay. While previous studies (Karlsson et al., 2018; Rajendram, 2021; Subhan, 2017; Ting & Jintang, 2020) focused on students employing their mother tongue languages to learn English, no research has been conducted on employing English or Malay to learn Tamil in terms of sociolinguistics. Therefore, the current study appraises translanguaging practices in a Tamil language classroom by identifying the language functions used when translanguaging and determining their effectiveness in learning Tamil.

RESEARCH METHODOLOGY

The present study used a qualitative method through a case study design. A case study is an in-depth investigation of a single individual or group to explore fundamental principles (Creswell, 2014). This study employed Tough's (1976) framework of language functions, which is intended for school students. The framework was applied to examine which language function helped students learn to effectively communicate with their teachers and peers to meet their needs. Tough's (1976) language functions are: self-maintaining, directing, predicting,

reporting, reasoning, projecting, and imagining. They were applied in answering questions, thinking critically, asking for information, retelling stories and expressing their feelings. This framework was applied in Tamil language classes conducted at primary national schools to analyse the language functions that were used the most by the students and the reasons for utilising them. Additionally, Baker's (2011) study on the benefits of translanguaging guided this study as well. The four benefits, according to Baker (2011), are (1) promoting deeper and fuller understanding, (2) developing weaker languages, (3) facilitating home-school cooperation, and (4) integrating fluent speakers with early learners. These four aspects of translanguaging were applied to test the benefits of translanguaging in Tamil language classrooms conducted at primary national schools.

Sampling

The study was conducted in 10 national primary schools in the Petaling Utama District, Selangor, which provide Tamil language classes. Petaling Utama District was chosen due to the focus of the study on urban area students. The government statistics show that this is an urban area due to its infrastructure, lifestyle and residential locations (Department of Statistics Malaysia, 2021). Taking this into consideration, Petaling Utama District was deemed an urban area. The respondents were 89 Indian students from Year 4 (aged 10 years old) and 10 teachers teaching Tamil (one from each school). The Year 4 students were chosen

because they were Level 2 students, those who had started to learn sentences in Tamil. Sentence-level engagement was important to our study as students learnt to make sentences at this level, which allows for the natural practice of translanguaging in the language classroom.

Instrument and Data Collection

The study instruments were audio recordings and interviews. The classroom voice recordings were performed by the teachers who taught Year 4 Tamil classes. Each audio recording lasted 30 minutes (a half-hour Tamil lesson) in all 10 schools. The interviews that were carried out were semi-structured interviews with a teacher teaching Tamil at each school. The interviews, each lasting 30 minutes, were conducted during the teachers' free time. An audio recorder was utilised to record the interviews. All interview sessions were completed within one month. However, three months were spent collecting the required data.

Data Analysis

The qualitative data from the classroom recordings were transcribed and coded manually, based on Tough's (1976) framework of language functions. Table 1 describes the language functions applied in this study.

The number of language functions used in Malay and English in the Tamil language classes was counted, while Tamil uses were disregarded, as this was a Tamil lesson. The interviews were analysed using Creswell's (2018) thematic analysis method, which

Table 1
Descriptions of tough (1976) language functions

No	Functions	Descriptions
1.	Self-maintaining	drawing attention to the self, or criticising others
2.	Directing	tell others what to do, for example, in a barrier game
3.	Reporting	recounting present or past experiences
4.	Reasoning	thinking, explaining, or problem-solving
5.	Predicting	using evidence to work out what might happen
6.	Projecting	putting yourself in someone else's shoes
7.	Imagining	using creativity and/or fantasy

involves identifying, determining, and reporting patterns within a dataset. Once the interviews were transcribed, the data were coded manually, and the themes were discussed based on Baker's (2011) four aspects of translanguaging.

Ethical Consideration

The researchers obtained approval from the Ethics Committee for Research Involving Human Subjects (UMREC), with the reference number of UM. TNC2 / UMREC_2495 Malaya. Subsequently, the researchers acquired approval from the Education Policy Planning and Research Division (EPRD) before submitting the approval request to conduct the survey at specific schools in Selangor to the *Jabatan Pendidikan Selangor* (JPNS). A consent letter was also issued to parents, teachers, and students before the data collection process commenced.

RESULTS

The classroom recording results revealed that the language functions occurred mostly between Tamil and English, with Tamil

and Malay limited in use. The interviews with the teachers also revealed students frequently used English in the overall sentence structure, with limited Tamil usage. Hence, the findings confirm that students used English as a means of learning Tamil. Table 2 shows the percentage and frequency of the language function usage in the Tamil classes.

Specifically, all 10 schools employed different language functions in the Tamil classes, with prediction as the most employed function at 92% (n = 82), followed by reporting at 31% (n = 28) and reasoning at 30% (n = 27). The imagining function constituted 25% (n = 22), self-maintaining at 22% (n = 20), and the directing function at 13% (n = 12). The least employed function was projecting at only 4% (n = 4).

Predicting functions in classrooms involved teachers asking questions to students, who subsequently predicted the answers, and this assisted in active classroom participation while developing speaking skills. Another language function commonly utilised was the reporting function by sharing stories about past and present experiences. Additionally, reasoning

Table 2
Percentage and frequency of language function usage in Tamil classes

Language functions			A		B		C		D		E		F		G		H		I		J	
	%	N	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E	M	E
1. Self-maintaining	22	19	-	1	-	1	3	-	-	3	-	2	-	2	-	-	-	3	-	1	-	3
2. Directing	15	13	-	3	-	2	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	5
3. Reporting	31	28	-	5	-	3	-	-	-	1	-	-	-	2	-	8	-	5	-	1	-	3
4. Reasoning	30	27	-	-	-	5	-	-	-	1	-	7	-	2	-	4	-	2	-	3	-	3
5. Predicting	82	73	-	8	-	13	5	-	-	2	-	7	-	14	-	9	-	1	-	7	-	7
6. Projecting	4	5	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	2
7. Imagining	25	22	-	4	-	3	-	-	-	-	-	6	-	2	-	1	-	3	-	1	-	2
%				24		29		9		18		28		25		26		16		17		28
N				21		26		8		16		25		22		23		14		15		25

Notes. N=Total, A–J =schools, M= Malay E =English
 Adapted from Tough’s (1976) language functions framework

functions were employed when students pondered the answers and performed problem-solving with peers and teachers. The frequency of the reasoning function demonstrated that students were actively engaged in learning, which assisted in developing problem-solving skills. The results also indicated that School C utilised translanguaging between Tamil and Malay, while the other nine schools employed translanguaging between Tamil and English. The results show that primary school students in Tamil language classrooms spoke English or Malay more frequently than Tamil, as it is the language that is more familiar to the students, resulting in them feeling more at ease and self-assured, which simultaneously enhances active participation in the lessons.

The 10 teachers involved in the interview sessions speak three languages: Tamil, English, and Malay. Six of the teachers have been teaching for the past

10–15 years, while the other four are still new to the education field, with between one and three years of teaching experience. Tables 3 and 4 below provide examples of transcribed excerpts between the teacher and students using translanguaging between Tamil and English.

Applying Bakers’ (2011) four translanguaging benefits, the interviews with the teachers revealed that translanguaging strategies in Tamil language classrooms benefited the students. Excerpts TT01 to TT05 from the teacher’s interviews were chosen for further discussion. Only five excerpts were selected as the other five teachers provided repeated information.

TT01 emphasised that,

“Yes, if I use mixed language, they understand what I teach. Normally, if I speak English in class, they pay attention and can be involved actively during the lesson.”

Table 3

Examples of excerpts from classroom recordings

T	இன்று, நாம்// தமிழ் மாதங்கள் பத்தி படிக்க போறோம்// what is தமிழ் மாதம்? Who knows? // (Today, we are going to learn about Tamil months) What are they? Who knows?)	
S1	தமிழ்..// Tamil month is Tamil, Tamil month is....	(predicting)
S2	Now is November month, teacher//	(predicting)

Note. T=teacher, S=student

Table 4

Examples of excerpts from classroom recordings

T	Yes, சரியா சொன்னீங்க, good// யாரெல்லா செய்திய பார்ப்பீங்க?// (Yes, sariya sonninge, good. ya:rella seithiye pa:rpi:nge?) Yes, well said, good. Who among you watches the news?	
S2	My அப்பா அம்மா watch the news அன்னாடிக்கும், teacher// (My parents watch the news every day, teacher)	(reporting)
S3	Teacher, Ashok சொல்லு அவன் doesn't பாக்கல the news at all// (Teacher, Ashok said he doesn't watch the news at all)	(reporting)

Note. T=teacher, S=student

At the same time, TT02 explained that *“the pupils can understand if I speak Tamil, but not completely. If I explain it to them in Malay and English, they can understand it better. Normally, they feel too shy to answer the questions. They are always reluctant to answer. When using mixed language, the students have the confidence to answer.”*

TT01 illustrates that students would pay higher attention in class and be actively involved in classroom activities when the teacher employed translanguaging between Tamil and English. In other words, the teacher believed that the students possessed a higher understanding of the subject when a familiar language was used to teach the target language. TT01 delineated that students

could understand the lessons more when the teacher utilised more than one language to teach. TT02 expressed that translanguaging between Tamil and English, and Tamil and Malay, assisted in students' understanding of the lesson and allowed them to develop self-confidence. Furthermore, without language barriers, students did not feel shy to answer the questions, which led to higher confidence in communicating with the teacher and friends. Therefore, translanguaging practices between Tamil and English, and Tamil and Malay, enabled students to be more participative in answering questions and sharing personal ideas. Resultantly, students gained a higher comprehension of Tamil when being taught with translanguaging practices.

TT03 stated that using translanguaging in a Tamil classroom has many benefits,

“... first, they can understand what I taught in the class even though they answer the questions asked in Malay or English. Secondly, translanguaging in the classroom makes it easier for the pupils to convey the message to parents. Most importantly, the parents can guide them at home with homework.”

TT03 indicated that utilising translanguaging in the classroom assisted the students in explaining homework to their parents, which allowed the parents to assist in completing the homework. Furthermore, additional information on classroom activities could also be shared with the parents accurately when the teacher applies translanguaging between Tamil and English in the classroom.

In addition, TT04 specified the reason for its effectiveness,

“...the pupils at least learn something. If not, they don't have an interest in learning. I feel that using some words in another language while teaching is more effective for the students to learn a language. The effectiveness can be seen when students can grasp the language even on a smaller scale. They are attentive if they understand the language.”

TT04 elucidated that students would be more attentive during the learning process when translanguaging practices were utilised, although the learning process was gradual. This shows that students paid more attention due to their understanding of the language learnt.

TT05 commented that,

“By using translanguaging, they can understand what I teach them, and they can reply to me in English. What I can see from this is that the pupils can do the homework, and the pupils have increased the number of getting PL3 in tests.”

TT05 explained that students could answer the questions correctly during the Tamil test after adopting translanguaging practices between Tamil and English in her Tamil classroom. This shows that translanguaging practices assisted students in comprehending the lessons and answering the teacher's questions in the language familiar to them. Furthermore, students also tended to complete all assigned homework. Though other factors might have been at play, several students scored mastery level 3 (PL3) in speaking tests, which could in part be attributed to incorporating translanguaging into the classroom.

DISCUSSION

Overall, our study shows that translanguaging between Tamil and English, and Tamil and Malay, has been widely used in Tamil language classrooms, and it has helped in the teaching and learning process of the target language. When it comes to students, the findings demonstrated that students primarily employed the predicting function in Tamil learning. This function generally involves the teachers asking questions and the students predicting the answers, which not only assists in speaking but also

ensures active involvement in the classroom. This is supported by Thwaite (2015), who discovered that predicting in the classroom assisted students in providing personal opinions and led to active participation in classroom activities. Similarly, students in Tamil classrooms highly depended on the predicting function to answer questions and communicate in the classroom via translanguaging, which assisted in improving listening and speaking skills. Moreover, reporting and reasoning functions were frequently employed to share stories about past and present experiences while pondering relevant answers and performing problem-solving with teachers and peers. Thwaite (2015) revealed that the reporting function assisted students in recalling and retelling personal past and present encounters. The students in this study also employed the reporting function to share personal experiences and retell stories. Hence, the findings suggest that students employed translanguaging practices at national primary schools to enhance Tamil learning.

Students, our research shows, had a better grasp of learning Tamil due to translanguaging between Tamil and English, and Tamil and Malay, in Tamil language classrooms, resulting in active participation from students. In line with this, García et al. (2017) confirmed that translanguaging can produce a classroom environment in which students challenge linguistic hierarchies while perceiving themselves as valued members of the classroom community, thereby employing available resources to fully participate in classroom activities.

Translanguaging practices engage students in activities, making them recognised and valued members of the classroom. This resonated with Ting and Jintang (2020), who also stated that students could improve their personal learning experiences and increase participation in the classroom through translanguaging. Similarly, this study showed that the Indian students utilised this technique to learn Tamil, as commented by the teachers regarding the increased participation of students in classroom activities.

Furthermore, translanguaging in Tamil classes led to a higher understanding of the language among Indian students when the teacher explained the content via translanguaging. The teachers also mentioned that students paid attention to the lesson if the language used was understandable to them. This finding resonates with Karlsson et al. (2018), who state that bilingual and multilingual students tend to be more interested in classroom activities if they can understand the language being taught. The findings mentioned by the teachers also posited that translanguaging can boost students' confidence and enable students to participate more freely in questioning and answering sessions. Language barriers can also be resolved through translanguaging, which is supported by Akbar and Taqi (2020), whose research confirmed that translanguaging in the classroom assisted students in expressing their needs and in being more confident in their communication by using a familiar language. In this study, students lacked

confidence at the beginning of the Tamil lesson due to limited Tamil proficiency and would not engage themselves in classroom activities. However, this changed when the teacher used translanguaging between Tamil and English, and Tamil and Malay.

Translanguaging in the classroom also allows students to convey information clearly to their parents, which creates positive relationships between schools and parents. Furthermore, the parents can assist children with their homework when it is conveyed to them properly. This is supported by García and Li (2014), who state that information conveyed to parents clearly will lead to higher cooperation between the school and parents. Effective information transfer and parental assistance with homework are feasible when both parents and children understand the communication language. This study also confirmed that students can effectively convey messages to parents if the medium is either English or Malay. Additionally, students can receive their parents' guidance in doing homework. Likewise, Kwon (2022) puts forth that implementing translanguaging in classrooms allowed both parents and students to fulfil their needs, creating good relations between school and parents. Similarly, in this study, the teachers expressed that students could complete the homework with parents' guidance at home due to explanations given in both Tamil and English. The teachers also mentioned that students would not finish the homework if the homework was entirely explained in Tamil and without the

parents' help. Aligning to this, Yuvayapan (2019) affirmed that providing explanations in a language that both parents and students can understand helped students complete their homework.

Finally, our findings indicate that translanguaging enhances students' speaking skills in the Tamil language. The teachers interviewed have confirmed that translanguaging practices between Tamil and English, and Tamil and Malay, in the Tamil language classroom have improved students' weaker language skills. This finding is like that of Subhan (2017), who noted that practising various languages in a classroom setting can enhance students' language abilities and promote the development of multilingual students. Our results suggest that the use of translanguaging in the Tamil language classroom leads to better proficiency in the target language.

CONCLUSION

Overall, our study found that students who are less fluent and not fluent in speaking Tamil require translanguaging to improve and enhance their Tamil learning. Our study hypothesises that adopting translanguaging without restrictions in Tamil classrooms will improve Tamil learning by removing the language barrier. Numerous benefits are also garnered from employing translanguaging in the language classroom, including assisting students in understanding the subject and having better focus in the classes. The teachers can also give instructions without disturbance and interruption. Furthermore, translanguaging can boost the number of

students attending Tamil classes, which increases the enthusiasm for learning Tamil.

By allowing students to use their stronger language skills as a bridge to grasp complex concepts in Tamil, the study aligns with Tough's (1976) assertion that language serves as a fundamental tool for cognitive development in educational settings. By permitting students to navigate between languages, they can better express and contextualise their understanding, leading to improved proficiency in Tamil, affirming Baker's (2011) concept of the dynamic use of translanguaging in enhancing language learning. Translanguaging fosters a more inclusive classroom environment where students feel comfortable expressing themselves. By reducing misunderstanding and facilitating clearer exchanges between students and teachers, translanguaging can streamline communication in the language classroom.

Implications of the Study

If translanguaging were more broadly incorporated into the curriculum, the students could enhance Tamil learning by incorporating existing language repertoires, enabling bilingual and multilingual students to score better in Tamil speaking tests due to an increased understanding of the target language. Concurrently, the school administration could observe improvement in Tamil results. The Ministry of Education Malaysia could also introduce Tamil modules with translanguaging explanations, which would assist students in grasping the target language.

Apart from that, employing L2 in teaching L1 provides several practical implications for teachers. L1 teachers should be given the leeway to employ L2 for students who require translanguaging to enhance personal learning. Nevertheless, the recommendation does not encourage teachers to employ more L2. Instead, L2 will assist learners in strengthening their language skills through translanguaging practices. Therefore, translanguaging should be given a focus when learning L1 in Tamil classes.

Limitations and Recommendations for Future Research

Despite these promising findings, the study has some limitations. One of the limitations is that the researchers only examined the speaking skills of Indian students at national primary schools in an urban area. Students from rural areas and the entire population of Indian learners in Selangor were not accounted for in this study. Thus, the findings might not apply to other similar schools in Selangor.

Future research can investigate translanguaging practices in reading and writing among students in rural areas with a larger sample size in Selangor. Other strategies, such as students' reading videos and writing work, could be included for data analysis to provide deeper insights into the current topic. In general, though we suggest that translanguaging practices have enhanced the speaking skills and participation of Indian students in the Tamil language classroom, there still needs to be further investigation to see the

implications of adopting such practices across the other language skills. Despite these limitations, our study does show the efficacy of incorporating translanguaging into the classroom spaces we studied.

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Examining the Psychometric Properties of the Westside Test Anxiety Scale Using the Rasch Model: Evidence from Nigerian Undergraduates

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ABSTRACT

The West Side Test Anxiety Scale (WTAS) is considered one of the most successful measures for determining which students have test anxiety deficits. However, the psychometric properties of this measure have not been adequately established, especially in Nigeria. Hence, the primary objective of the current study is to investigate the psychometric qualities of the 10-item WTAS in a sample of 300 undergraduates at a public university in Nigeria. This cross-sectional study employed a convenience sampling method. The investigation was conducted using the Rasch analysis measurement framework to investigate the following criteria: Rasch model's assumptions, construct validity, reliability evidence, Wright map, and differential item functioning (DIF). The results indicated satisfactory outcomes for most of the criteria, including DIF, construct validity, and reliability evidence. Specifically, the analysis revealed strong item reliability at 0.96 and acceptable person reliability at 0.70, indicating that the data met the expected standards by the Rasch model. However, it was discovered that the WTAS items were unable to target responders with higher abilities at the top of the assessed instrument on the Wright map. Consequently, we recommend that future revisions of the WTAS should include items specifically designed to target and differentiate among high-ability respondents. This adjustment would improve the scale's precision across a broader range of test-taker abilities.

Keywords: Nigeria, psychometric properties, Rasch model, undergraduates, westside test anxiety

ARTICLE INFO

Article history:

Received: 05 August 2024

Accepted: 14 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.12>

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INTRODUCTION

Test anxiety is a negative psychological state that students experience in any kind of educational setting (Richard et al., 2023). It is normal to feel a little nervous before an exam due to human nature. On the other

hand, excessive and persistent anxiety is harmful and may affect a student's academic achievement (Muhammed et al., 2024). During exam times, anxiety is particularly prevalent due to pressure to perform well or worry about failure (Yuksel et al., 2018). Researchers argued that test anxiety may have adverse influence on students' performance, based on the type and intensity of the symptoms of anxiety (Hackel, et al. 2021; Pekrun & Stephens, 2012; Sanchez & Furlan, 2017; Von der Embse et al., 2018), student at the early stage of study are characterized by a lack of confidence, low self-efficacy, worry, and fear of failure, which in turn can influence their performance. In addition, several researchers have also discovered a negative correlation between all aspects of test anxiety and students' academic performance (Keith et al., 2019; Putwain et al., 2013; Raufelder & Ringeisen, 2016; Schnell et al., 2020).

Evidently, the ability to demonstrate skills and aptitudes on a test or set of exams may play a significant role in both academic advancement and entry into, or advancement within, a vocational sector (Khan et al., 2021). Given this, how people react to high exam anxiety may have a significant impact on educational settings, particularly for students in higher education who want to graduate with good results and enter a lucrative workforce (Talwar et al., 2019). The physiological and behavioral reactions associated with taking written or oral exams, which are felt both before and during the test due to concerns about potential unfavorable outcomes or exam failure, are referred to as

test anxiety (Daniel & Ogunyewo, 2018; Jayasankara et al., 2018;).

To measure the test anxiety impairments in students, Driscoll (2004) created the Westside Test Anxiety Scale (WTAS), a concise 10-item scale designed to be completed in a short duration of five to eight minutes, providing an efficient measure of test anxiety. WTAS is a highly efficient test anxiety assessment instrument designed to find students who struggle with anxiety (Richard et al., 2023). It has been the primary anxiety measure in many studies and has been utilized for many years globally by school counsellors (Talwar, 2019).

The instrument has been used in many countries. In some African countries, such as Kenya, the WTAS has been adopted as a standard measure of test anxiety in many institutions because it is brief and effective (Richard et al., 2023). Countries like Nigeria, Ghana, Egypt, and South Africa have also used WTAS to measure test anxiety in educational settings (Samuel, 2021). In Nigeria, the WTAS has been widely applied in various educational contexts. However, most studies (Abiodun et al., 2017; Muhammad & Maimuna, 2018; Sani, 2021) have focused on measuring test anxiety and its related constructs rather than critically examining the scale's psychometric properties, especially at the item level. This leaves critical gaps in understanding its functionality and limitations. The current study addresses this gap by employing the Rasch model to provide an in-depth evaluation of the WTAS in the Nigerian context.

Moreover, the WTAS is unique compared to other psychometric tools due to its specific focus on cognitive and emotional aspects of test anxiety, its brevity, and its alignment with contemporary Rasch measurement principles. Unlike broader anxiety measures, the WTAS is designed specifically for assessing test anxiety in educational contexts, making it more targeted and practical for academic settings. Additionally, its unidimensional structure ensures that it provides a clear and focused measurement of test anxiety, distinguishing it from other multidimensional anxiety scales that assess general psychological distress rather than test-specific anxiety. Furthermore, the scale's ease of administration and scoring make it particularly useful for large-scale assessments and research applications.

The Rasch measurement model was chosen for this study due to its unique advantages over traditional psychometric methods in evaluating the psychometric properties of instruments. Unlike Classical Test Theory (CTT), which focuses on test-level reliability and item discrimination, the Rasch model provides detailed item-level analysis. It allows for an evaluation of specific items' performance in terms of difficulty, person-item fit, and test functioning on a common interval scale, making it particularly suitable for identifying issues such as misfitting items or gaps in the measurement range at the item level. Additionally, the Rasch model ensures that the scale operates invariantly across different subgroups, thereby addressing fairness, a critical component in test evaluation.

In this study, the Rasch model primarily assesses aspects of construct validity by evaluating Baghaei's (2008) framework on WTAS and the unidimensionality of the WTAS. While unidimensionality is a foundational requirement for construct validity, it alone may not be sufficient to fully establish this form of validity. Future research could extend this work by examining additional aspects of construct validity, such as convergent or discriminant validity, to provide a more comprehensive evaluation. The choice to focus on construct validity over content or criterion validity was driven by the study's aim to explore the underlying structure of the WTAS and its ability to measure the intended construct accurately.

Baghaei's (2008) framework was employed to analyze the evidence supporting the construct validity of the WTAS. Within this framework, two critical threats to construct validity—namely, construct-irrelevant variance and construct underrepresentation—were identified and investigated. Construct-irrelevant variance refers to the presence of undesired factors within the measurement that may distort the assessment of the intended construct. This issue was examined using infit and outfit mean square (MNSQ) statistics in the model-data fit analysis, which helps detect any misfit between the model and the data. On the other hand, construct underrepresentation pertains to the inability of the measure to capture essential aspects of the intended construct. To evaluate this threat, the study visually inspected the ordering of item difficulties. A smooth

and continuous progression in the item difficulties suggests that the scale adequately covers the construct without any significant gaps or areas of under-representation. These two concepts, examined within the context of Rasch model analyses, are crucial for ensuring the comprehensive and accurate measurement of test anxiety.

Psychometric evaluation encompasses more than reliability and validity; it also addresses fairness, various forms of validity, and diverse analytical approaches. This study acknowledges the importance of fairness by discussing how the WTAS performs across different subgroups, referencing Nnenanya et al.'s (2022) findings on invariance by gender and location in Kano State, Nigeria. While the current study emphasizes item-level psychometric properties through Rasch model analysis, it also highlights the need for further research into construct validity, particularly in understanding how well the WTAS measures test anxiety across diverse educational and cultural settings.

The integration of reliability and validity is strengthened by employing the Rasch model, which goes beyond traditional methods to offer detailed insights into item functioning and test structure. This modern psychometric approach complements traditional analyses, revealing critical gaps such as the scale's inability to adequately capture the abilities of high-performing students. By leveraging the strengths of modern methods like Rasch analysis, this study contributes to a nuanced understanding of the WTAS and provides a foundation for its refinement and contextual adaptation.

LITERATURE REVIEW

Due to the WTAS's popularity, numerous investigations into its psychometric properties have been carried out in a variety of contexts, with much of the research having produced positive results. However, many of these studies (Driscoll, 2004; Richard et al., 2023; Talwar et al., 2019) only addressed statistics at the test level, like factor structures and the internal consistency of the WTAS, neglecting a more detailed examination of the scale's psychometric properties at the item level. In addition, without item-level analysis, educators may miss opportunities to refine or eliminate poorly performing questions.

In Nigeria, several studies have applied WTAS to explore test anxiety across various educational settings, yet few have critically examined its psychometric properties. For instance, Nnenanya et al. (2022) conducted a study on the invariance of the WTAS by gender and location among secondary school students. This study revealed that the scale performed consistently across different demographic groups, suggesting that it is a robust tool for assessing test anxiety. However, Nnenanya et al.'s (2022) work primarily focused on the differential item functioning (DIF) between male and female students, without providing an in-depth evaluation of the scale's item-level psychometric properties, such as item difficulty or person-item fit. This leaves a significant gap in understanding the scale's capacity to measure test anxiety accurately at the item level within diverse student populations.

Sani (2021) further applied the WTAS to assess test anxiety among university students in Kano State, Nigeria. This study primarily explored the relationship between test anxiety and academic performance. While it confirmed that test anxiety was a significant factor influencing academic outcomes, the study did not address the underlying structure of the WTAS or its reliability and validity in measuring test anxiety among Nigerian university students. The absence of psychometric analysis in this study limits the generalizability of the findings, as it is unclear whether the WTAS accurately captures the construct of test anxiety in this specific context. In a similar vein, Abiodun et al. (2017) used the WTAS to evaluate the role of academic self-confidence in relation to test anxiety among Nigerian university students. Their study demonstrated that test anxiety negatively impacted academic self-confidence, but like the others, it did not explore the scale's psychometric robustness. The WTAS was used as a tool to assess anxiety. However, its item-level functioning and measurement properties were not considered, leaving room for improvement in understanding the scale's precision and reliability in the Nigerian context.

Additionally, Muhammad and Maimuna (2018) examined the impact of cognitive restructuring counseling approaches on test anxiety in secondary school students and other higher education institutions in Kano State, Nigeria. While this study is valuable for understanding intervention strategies, it similarly relied on the WTAS

without addressing the scale's psychometric characteristics. The study did not explore whether the WTAS accurately measured test anxiety across different levels of educational attainment or whether any items were biased or misfitting. Despite the widespread use of the WTAS in Nigeria, there is a notable absence of research focused on evaluating its psychometric properties at the item level. This study aims to fill this gap by applying the Rasch model to assess the scale's construct validity, reliability, and fairness. The Rasch model allows for a more granular examination of the scale's item difficulty and person-item fit, providing a more nuanced understanding of its effectiveness in measuring test anxiety among Nigerian undergraduates. By addressing these psychometric concerns, this study offers critical insights into the strengths and weaknesses of the WTAS, ultimately contributing to its refinement for use in educational settings.

Driscoll's (2007) original development of the WTAS involved factor analysis to identify underlying dimensions of test anxiety and analysis at the test level to evaluate reliability and validity. While these methods are foundational in psychometric research, they primarily focus on the overall structure and consistency of the test, offering limited insights into individual item performance or the interaction between items and respondents. Traditional approaches, such as factor analysis, assume equal item functioning and do not account for the hierarchical relationship between item difficulty and respondent ability.

The WTAS offers a unique contribution to the assessment of test anxiety from a theoretical perspective. Unlike traditional multidimensional test anxiety scales, the WTAS is grounded in a unidimensional framework that aligns with cognitive interference theory, emphasizing the direct impact of anxiety on test performance. Its concise structure enables a focused measurement of test anxiety severity, distinguishing it from broader anxiety measures that assess multiple dimensions such as worry, emotionality, and physiological responses. Additionally, this study provides new empirical evidence on the psychometric properties of the WTAS using Rasch model analysis, further validating its theoretical foundation. By demonstrating its effectiveness in measuring test anxiety within a Nigerian undergraduate context, this study highlights the WTAS's relevance as a robust and efficient tool for assessing test anxiety in educational settings.

This study is grounded in Item Response Theory (IRT), particularly the Rasch model, which provides a robust framework for evaluating the psychometric properties of the WTAS. The Rasch model ensures that measurement scales adhere to fundamental principles of construct validity, item functioning, and measurement invariance, offering a more refined analysis of test anxiety assessments. By applying Rasch analysis, this study contributes to the theoretical discourse on how psychological constructs such as test anxiety can be measured with precision and reliability.

The Rasch measurement model offers significant advantages over these traditional methods. Unlike factor analysis, the Rasch model operates at the item level, providing detailed information on item difficulty, discrimination, and fit. It transforms ordinal raw scores into interval-level measurements, enabling more precise interpretations of test anxiety levels. Additionally, the Rasch model evaluates the invariance of item functioning across subgroups, ensuring that the test measures the construct equitably. This is particularly important in diverse educational settings like those in Nigeria, where differences in demographic and cultural factors may influence test performance.

Furthermore, the Rasch model offers a Wright map that visually aligns respondent abilities with item difficulties, highlighting gaps in the measurement range and identifying items that may not align with any respondent abilities. This level of detail provides actionable insights for refining the WTAS, such as adding items to better capture high or low levels of test anxiety. By employing the Rasch model, this study validates the WTAS and contributes to its enhancement, addressing limitations that traditional methods cannot resolve.

On the other hand, Classical Test Theory (CTT) posits that an individual's score comprises both their true ability score and some measurement error. It is important to note that neither the true score nor the error score can be directly observed. Consequently, certain assumptions are necessary to evaluate students' scores. These

assumptions were outlined by Hambleton and Jones (1993) as follows: (a) the absence of correlation between unobserved scores, (b) a zero mean error score in the population, and (c) the absence of correlation between error scores from parallel tests. The current study seeks to assess the psychometric qualities of the WTAS by employing the Rasch measurement model analysis. This assessment is essential because understanding the psychometric qualities of the WTAS will enable researchers to obtain accurate, reliable, and valuable data, thereby facilitating a more appropriate interpretation of the results. This, in turn, improves research quality, provides information for focused interventions and policies, and contributes to the body of knowledge in education.

The advent of the modern test theory (IRT), along with associated measurement models, has enabled a more precise analysis of dichotomously scored data. Specifically, the Rasch Measurement Model, a subset of IRT, provides a framework for estimating an individual's score using Equation 1, as described by Khairani et al. (2020):

$$P(\theta) = \frac{\exp(\theta - b)}{1 + \exp(\theta - b)} \quad [1]$$

Where: $P(\theta)$ = is the probability of a correct response ($x=1$) given the person's ability (θ); b = represents the item difficulty or threshold; θ = represents the person's ability or trait level; Exp = is the exponential function

Furthermore, the Rasch Model is a renowned measurement framework that facilitates the conversion of ordinal raw

scores into equivalent interval measures, thereby enabling linear measurement (Linacre, 2006). This transformation allows for the estimation of precise and comparable measures, fostering a more accurate understanding of the underlying construct. As a result, this approach is increasingly being used to validate instruments (Dina et al., 2024; Emerson et al., 2022; Farshad & Purya, 2024; Hamad, 2021; Khairani et al., 2020; Mohd Matore & Khairani, 2020; Mustapha & Ehab, 2022; Nadhirah et al., 2022; Richard et al., 2023). Rasch model analysis, in contrast to CTT, is more resilient to the distribution's normality assumption and may even determine a person's score if some data is absent. Furthermore, as opposed to test-level statistics like those in the CTT, the Rasch model analysis offers a more nuanced understanding of the data by providing item-level statistics, which facilitate a deeper interpretation of the results. These statistics enable researchers to examine the performance of each item, identifying areas where the measure may be improved, and ultimately leading to a more comprehensive understanding of the construct being measured. This includes more comprehensive proof of the instrument's psychometric properties, like validity and reliability.

In addition, IRT offers insights into the testing's fairness, i.e., whether subgroups of the sample being tested (such as location, gender, and socioeconomic status) perceive the instrument's items similarly. Moreover, it is stated that the framework can assess whether the tool being used can effectively

target the specified sample. Muis et al.'s (2009) study, which combined Classical Test Theory (CTT) and Rasch model analyses, revealed that while CTT analyses showed promising results regarding the instrument's reliability and validity, the Rasch model analysis uncovered significant limitations and issues that were not apparent through CTT. Based on these findings, we concluded that the Rasch model is a more comprehensive and robust analytical approach compared to CTT, providing a more accurate understanding of the instrument's measurement properties.

Likewise, Baghaei's (2008) framework offers a robust approach to evaluating the construct validity of measurement instruments by addressing two critical threats: construct-irrelevant variance and construct underrepresentation. Construct-irrelevant variance refers to the inclusion of factors unrelated to the intended construct, such as respondent characteristics or external influences, which may distort the measurement results. On the other hand, construct underrepresentation occurs when the measurement instrument fails to capture all critical aspects of the intended construct, leading to an incomplete assessment. By addressing these two threats, Baghaei's (2008) framework ensures that instruments provide a valid and comprehensive measurement of the construct of interest, aligning with the principles of psychometric validity.

In the context of Rasch model analysis, Baghaei's (2008) framework is particularly useful for evaluating model-

data fit and identifying potential issues with the measurement instrument. For instance, construct-irrelevant variance can be detected through infit and outfit mean square statistics, which highlight items that do not conform to the expected measurement model. Similarly, construct underrepresentation can be assessed using the item-person map, which examines the alignment between item difficulties and respondent abilities to ensure comprehensive coverage of the construct. This framework provides a theoretical foundation for the current study, guiding the analysis of the WTAS and ensuring that the scale accurately and comprehensively measures test anxiety. Including this perspective enhances the validity and reliability of the study findings.

METHODOLOGY

Research Design

Data for the present study were gathered over a single time using a cross-sectional study method. This approach was selected due to its capacity to collect a large amount of data about the psychometric properties of the WTAS from an extensive sample of respondents.

Respondents

A total of 300 undergraduates from the faculties of Education, Humanities, Natural and Applied Sciences, Management Sciences, Agriculture, and Information and Communication Technology (ICT) at Sule Lamido University participated in this study. The convenience sample consisted

of 300 participants, including 160 females (53.3%) and 140 males (46.7%), who were selected during lecture classes based on their accessibility and willingness to participate. The average age of the respondents ranged from 19 to 30 years old, and they were all in their first year at university.

Measures

The study utilized the 10-item WTAS questionnaire, which is formatted on a Likert scale designed to detect and evaluate test anxiety impairment in students. Example items from the WTAS include statements such as: *“The closer I am to a major exam, the harder it is for me to concentrate on the material,”* *“When I study, I worry that I will not remember the material on the exam,”* and *“During important exams, I think that I am doing awful or that I may fail.”* According to Driscoll (2007), WTAS can be scored as follows: Scores between 1.0 and 1.9 indicate low test anxiety, 2.0 and 2.5 represent average test anxiety, 2.5 and 2.9 indicate higher than average test anxiety, 3.0 and 3.4 suggest moderately high test anxiety, with some items indicating high levels of anxiety, 3.5 and 3.9 indicate high test anxiety, with half or more items rated as high, and 4.0 and 5.0 reflect extremely high test anxiety, with items rated as high or extreme.

Data Collection and Analysis

The Sule Lamido University administration granted written consent for the purpose of data collection. Prior to administering the scale, students were fully informed about

the study’s objectives, thereby guaranteeing that their responses would be treated with utmost confidentiality and anonymity, ensuring a secure and private assessment experience. The questionnaire in the form of a Google form was shared with the students’ WhatsApp groups during the last 30 minutes of the 2-hour lecture classes. Participation was voluntary and applicable only to students who were present during the assessment. The study received university approval.

Rasch model analysis was employed to analyze the collected data in the following order: (1) Rasch model’s assumptions, (2) evidence of construct validity and reliability, (3) differential item functioning (DIF) analysis between male and female students, (4) the item person map (Wright map). Strict assumptions are essential when using the Rasch Model as a measurement framework. The two important Rasch model assumptions are as follows: (1) The data must demonstrate a good fit with the model’s expectations, indicating a compatible and coherent relationship and (2) The construct being measured must possess a unidimensional nature, meaning it can be represented by a single underlying trait or dimension, without any additional underlying factors influencing the measurements, Linacre (2006).

The assumption of the Rasch model’s data fit was evaluated using the infit and outfit mean squares (MNSQ) statistics, which provide a measure of how well the data aligns with the Rasch model’s expectations. According to Bond and Fox

(2015), MNSQ values between 0.6 and 1.4 logits indicate an acceptable fit, suggesting that the data is behaving in line with the model's assumptions. Additionally, the assumption of unidimensionality was assessed through Principal Component Analysis (PCA) of residual procedures, which helps to identify any potential additional dimensions or factors that may be present in the data. By examining the results of these analyses, we can determine whether the data meet the necessary assumptions for Rasch model analysis, ensuring the validity and accuracy of our measurements. This technique aims to determine whether other components can be defined from the residuals by removing the most significant factor. An eigenvalue greater than 2.0 for the first extracted construct is considered to violate the unidimensional assumption (Linacre, 2006). According to the same author, a scale demonstrates unidimensionality when the primary measurement dimension accounts for greater than 20% of the total variance, indicating that the scale effectively measures a single underlying construct.

The Rasch measurement analysis offers a clear statistical method for evaluating the measurement's reliability. Information about the reproducibility of the results can be found in the item difficulty reliability index. This index is calculated by dividing the observed variance in item difficulty by the true variance in item difficulty. Items with higher reliability indices are more likely to accurately reflect their true difficulty levels, ensuring that items identified as more difficult genuinely possess higher

difficulty compared to those with lower difficulty measurements. The sample size and difficulty variance determine the item's difficulty reliability. High item difficulty reliability values are the result of large sample sizes and a wide range of item difficulties, and vice versa. Values greater than 0.80 are regarded as acceptable by Bond and Fox (2015); however, Fisher (2007) classifies values greater than 0.94 as strong.

Baghaei's (2008) framework was used to analyze the evidence supporting the construct validity of this measure. Construct-irrelevant variance and construct underrepresentation are the two threats to construct validity that need to be identified to investigate construct validity, according to this approach. The question of whether the measurement contains undesired constructions is at the heart of construct-irrelevant variance. It was found by utilizing the previously described infit and outfit MNSQ in the model-data fit analysis. However, the term "construct underrepresentation" describes the measurement's inability to capture significant facets of the desired concept. The threat of construct under-representation was evaluated by visually examining the ordering of the items' difficulties, where a continuous and smooth progression between items indicates that the scale is comprehensively capturing the construct, without any notable gaps or weaknesses.

Summary statistics were calculated to assess the reliability and separation indices for both respondents and items. These analyses aimed to evaluate the scale's ability

to differentiate between respondent ability levels and to measure the precision and consistency of item difficulty estimates. This approach ensures a thorough examination of the WTAS's psychometric properties and its capacity to reliably measure test anxiety across diverse samples.

In the Rasch Model's item-level analysis, another important statistic is the Differential Item Functioning (DIF) analysis. DIF analysis examines whether a particular item favors one group over another. If different groups perceive the same item differently, it suggests variation in interpretation. According to Bond and Fox (2015), a DIF contrast statistic greater than 0.5 logits indicate evidence of DIF items. In the present study, we investigated whether there were differences in how boys' and girls' respondents perceived the items, as reported by numerous past studies (Hamad, 2021; Mohd Matore & Khairani, 2020; Mustapha & Ehab, 2022; Richard et al., 2023).

RESULTS

The results showed that the mean infit MNSQ was 1.00 logits (SD = 0.07 logits), and the mean outfit MNSQ was 0.99 logits (SD = 0.08 logits), revealing that the items

generally fit the expected value of 1.00 logits (Table 1). Furthermore, the infit MNSQ values for each item ranged from 0.90 to 1.10 logits, and the outfit MNSQ values ranged from 0.85 to 1.08 logits, all falling within the acceptable range of 0.6 to 1.4 logits recommended by Bond and Fox (2015). These results suggest that the items demonstrate a good fit to the Rasch model, with no evidence of misfit or unexpected behavior.

As presented in Table 2, the eigenvalue for the primary construct was 1.8, which falls below the recommended threshold of 2.0 suggested by Linacre (2006) for establishing unidimensionality. However, it's important to note that this primary construct accounts for 28.5% of the variance in the measurement, indicating that the majority of the variance is explained by the first dimension, supporting the assumption of unidimensionality.

The summary statistics presented in Tables 3 and 4 confirm the strong psychometric properties of the WTAS. Table 3 shows a person reliability of 0.73, indicating acceptable consistency in respondents' performances. Additionally, the separation index of almost 2 reflects the scale's ability to distinguish respondents

Table 1
Descriptive statistics (in logits)

Variables	Measure	Model Error	Infit MNSQ	Outfit MNSQ
Mean	0.00	0.07	1.00	0.99
SD	0.33	0.00	0.07	0.08
Max.	0.40	0.07	1.10	1.08
Min.	-0.38	0.06	0.90	0.85

into at least two distinct levels of test anxiety. In addition, Table 4 reports a high item reliability of .96 and a separation index of 4.92, demonstrating the scale's

ability to differentiate item difficulties with great precision. These findings validate the WTAS's measurement quality and highlight its reliability in assessing test anxiety.

Table 2
Findings from the Principal Component Analysis (PCA) of residuals

		Empirical		Modelled	
Total raw variance observed	=	40.0	100.0%		100.0%
Raw variance explained by measures	=	4.0	28.5%		28.8%
Raw variance explained by individuals	=	1.3	9.2%		9.3%
Raw Variance explained by the items	=	2.7	19.3%		19.5%
Raw unexplained variance (total)	=	10.0	71.5%	100.0%	71.2%
Unexplained variance in the first contrast	=	1.8	12.5%	17.5%	
Unexplained variance in the second contrast	=	1.3	9.6%	13.5%	
Unexplained variance in the third contrast	=	1.2	8.5%	11.9%	
Unexplained variance in the fourth contrast	=	1.1	8.1%	11.3%	
Unexplained variance in the fifth contrast	=	1.1	7.9%	11.0%	

Table 3
Summary statistics: Person

	Total Score	Count	Measure	Model Error	Infit		Outfit	
					MNSQ	ZSTD	MNSQ	ZSTD
Mean	27.8	10.0	0.33	0.38	0.99	0.0	0.99	0.0
SD	5.3	0.0	0.78	0.16	0.42	1.2	0.45	1.2
Max.	38.0	10.0	2.19	1.84	2.27	2.4	2.74	2.6
Min.	10.0	10.0	-4.25	0.33	0.09	-4.4	0.09	-4.2
Real RMSE		0.43	True SD	0.65	Separation	1.51	Person Reliability	0.69
Model RMSE		0.41	True SD	0.67	Separation	1.65	Person Reliability	0.73

Table 4
Summary statistics: Item

	Total Score	Count	Measure	Model Error	Infit		Outfit	
					MNSQ	ZSTD	MNSQ	ZSTD
Mean	834.3	300.0	0.00	0.07	1.00	0.1	0.99	-0.1
SD	77.9	0.0	0.33	0.06	0.07	1.0	0.08	1.0
Max.	965.0	300.0	0.40	0.07	1.10	1.4	1.08	1.0
Min.	732.0	300.0	-0.62	0.06	0.90	-1.3	0.85	-1.06
Real RMSE		0.07	True SD	0.32	Separation	4.83	Item Reliability	0.96
Model RMSE		0.07	True SD	0.32	Separation	4.92	Item Reliability	0.96

Furthermore, the item reliability measure of 0.96 is considered an acceptably strong value, as noted by Bond and Fox (2015). The results also demonstrate strong construct validity, as all the items showed a good fit between the empirical data and the Rasch model's expectations, with acceptable infit and outfit MNSQ values. This indicates that the items are measuring the intended construct without significant interference from irrelevant variables, thereby minimizing the risk of construct-irrelevant variance. Inspections of item difficulty measurements between items are presented in Table 5. According to Linacre (2006), the gaps between consecutive items are all less than 0.5 logits, indicating that the gaps are relatively small and likely insignificant. This suggests that the items are evenly spaced and that the measurement scale is continuous, without any notable gaps or discontinuities. The table further

presented that, according to the acceptable DIF contrast values of 0.00 - 0.23 logits, both genders interpreted the items similarly and the items do not favor any group.

On the other hand, the Wright Map visually represents the distribution of persons and items on the measurement ruler in logits, offering a comprehensive view of both the abilities of individuals and the difficulties of items. As shown in Figure 1, the respondents are represented by #, and items are labeled Item1–Item10. “.” indicates the proportion of the three respondents, and each # represents three respondents. The result shows that the most difficult item is Item 4 (+0.40 logits), and the easiest item is Item 5 (-0.62 logits). The logits ranged from +0.40 to -0.60 logits, and that satisfied the acceptable range of +3.0 to -3.0 logits that was considered acceptable (De Klerk et al., 2013; Linacre, 1994).

Table 5
Item statistics and differential item functioning (DIF) contrast (in logits)

Item	Measure	Count	SE	Infit MNSQ	Outfit MNSQ	DIF Contrast
4	732	300	0.06	1.09	1.07	0.04
10	751	300	0.06	0.96	.93	-0.30
7	790	300	0.06	1.03	1.02	0.05
9	793	300	0.07	0.91	.89	-0.06
1	824	300	0.06	1.05	1.06	-0.26
6	801	300	0.07	0.97	.97	0.20
3	814	300	0.07	1.08	1.05	-0.07
2	943	300	0.07	0.90	.85	0.23
8	930	300	0.07	1.10	1.08	0.09
5	965	300	0.07	0.94	.97	0.00
Mean	0.00	300.0	0.07	1.00	.99	
SD	0.33	0.0	0.00	0.07	.08	

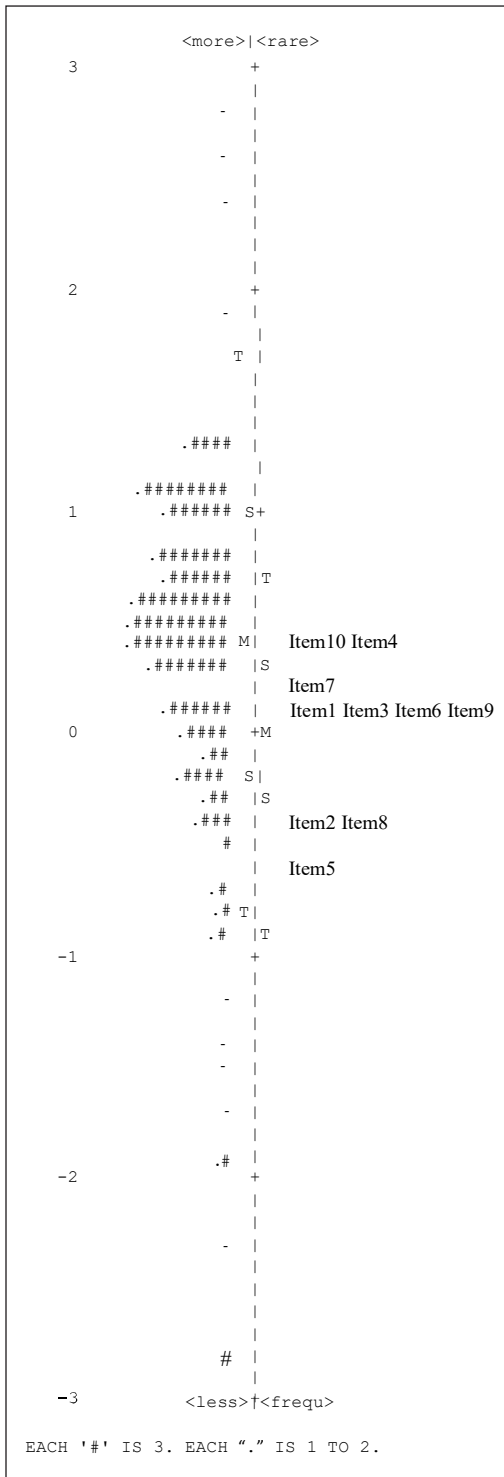


Figure 1. Item Person Map (Wright Map)

DISCUSSION

The primary objective of this study is to investigate the psychometric qualities of the WTAS using a sample of Nigerian undergraduates, which is one of the successful instruments created to evaluate test-takers' anxiety levels. To achieve this goal, the study assessed the WTAS using the criteria within the Rasch Model analysis framework, including the Rasch model's assumptions, reliability, evidence of construct validity, Differential Item Functioning (DIF), and the Wright Map. The results from the fit statistics and Principal Component Analysis (PCA) of residuals showed that all assumptions of the Rasch model were met, revealing a good fit between the data and the model. Specifically, the fit statistics demonstrated that the items were functioning as expected, and the PCA results confirmed the unidimensionality of the scale, with no significant residual variance. Therefore, the measurement of test anxiety using the WTAS demonstrates properties of equal-interval measurement. This finding was also supported by Richard et al. (2023), who analyzed the psychometric qualities of the WTAS with a sample of students from Kenya (Africa). They employed the Rasch model criteria, and all the assumptions were also met. Since the findings of the present study indicate that the Westside test anxiety scale is a valid and reliable measure of test-anxiety impairment in a sample of Nigerian undergraduates, we therefore recommend WTAS for use in Nigeria.

Furthermore, the encouraging outcome from the good reliability value in the present

study may be attributed to the large coverage of item difficulty and the sample size that was employed. Therefore, for a similar sample of test takers, it may be concluded that the difficulty of WTAS items is highly replicable. This means that there is a good chance the item ordering in the WTAS won't change if it is given to a different sample of Nigerian university students. The study conducted in Malaysia by Talwar et al. (2019) likewise reported on the good reliability of the WTAS items.

Meanwhile, the WTAS reports positive results for construct validity evidence, indicating little evidence of construct-irrelevant variation and construct under-representativeness. Given that the WTAS measures test anxiety impairment and no other unintended constructs, test users can interpret test results with confidence according to the excellent evidence of the construct validity of the instrument. The outcome is not unexpected at this point, as other research conducted across a wide range of cultural contexts has demonstrated the WTAS's strong construct validity (Ehab, 2022; Richard, 2023; Talwar, 2019). Moreover, Driscoll's (2004) initial validation of the WTAS provided evidence of strong construct validity and reliability at the test level, making it a widely accepted tool for assessing test anxiety. However, the original analysis primarily focused on overall test performance without delving into item-level psychometric properties. Specifically, key aspects such as item difficulty, fit, and functionality across varying respondent abilities were not addressed. Furthermore,

the WTAS has been widely used in different cultural and educational settings, yet there is limited evidence of its performance in contexts outside its original development environment, particularly in Nigerian universities. This study addresses these gaps by employing the Rasch model to evaluate the WTAS at the item level, providing insights into its construct validity in a new context. The DIF analysis shows that the items do not differ between genders, and this finding is supported by various studies (Muhammad & Maimuna, 2018; Nnenanya et al., 2022).

The Wright map analysis revealed that the abilities of approximately half of the students exceeded the difficulty levels of the items on the WTAS. This finding indicates that many students possess higher test-taking abilities compared to the demands of the items in the scale. Such an alignment suggests that while the WTAS effectively captures a range of test anxiety levels, it may lack sufficient items targeting respondents with higher abilities. This mismatch highlights a potential ceiling effect, where the existing items are less informative for students with abilities significantly above the average difficulty level. Addressing this gap could involve revising or expanding the scale to include items that better differentiate among high-ability respondents, thereby enhancing the WTAS's ability to provide more comprehensive measurement across the entire spectrum of test-taker abilities.

Additionally, the WTAS is a concise ten-item scale specifically developed to evaluate and identify students experiencing test anxiety

impairment, this study provides evidence that the high performing respondents were not effectively targeted by the WTAS, particularly 142 respondents at the upper and 15 respondents at the lower ends of the scale continuum (Figure 1) the respondents are far from the items. Therefore, we recommend exploring alternative strategies to ensure the scale adequately captures the abilities of respondents across the entire spectrum, particularly those at the extreme ends of test anxiety.

The findings of this study contribute to the body of knowledge by providing empirical evidence on the psychometric properties of the WTAS, as assessed using the Rasch model. This approach has been largely unexplored at the item level. The study highlights the scale's limitations in differentiating high-ability respondents, emphasizing the need for item refinement to enhance measurement precision. Additionally, by examining WTAS within a Nigerian undergraduate population, this research extends its validity and applicability to diverse educational contexts, offering valuable insights for future test development and adaptation.

CONCLUSION

Using the Rasch measurement model analysis, this study has demonstrated the strong psychometric properties of the 10-item WTAS among Nigerian university students. This study has supplied empirical data on the items. The results indicated a need to revise or expand the item pool to better assess anxiety in students with high abilities,

ensuring that the scale is comprehensive and inclusive for all students, regardless of their ability level. Future studies should proactively test the items with students from other postsecondary educational institutions, like colleges of education and polytechnics. Only university students are included in this research. Research should go beyond psychometric issues to have a deeper understanding of the WTAS items. Therefore, researchers need to conduct more qualitative research to determine what factors contribute to one item's difficulty relative to others, which raises the level of test anxiety.

Implications of the Study for Theory and Practice

The results of our Rasch model analysis of the WTAS have significant implications for both theory and practice. Firstly, this study contributes to the theoretical understanding of test anxiety measurement, particularly within the Nigerian context. By employing the Rasch model to evaluate the WTAS's psychometric properties, we establish its construct validity, reliability, and differential item functioning (DIF), reinforcing its suitability for assessing test anxiety. The findings also underscore the Rasch model's robustness in validating psychological constructs, demonstrating that it provides a more precise, item-level evaluation compared to classical test theory (CTT). This highlights the necessity of employing modern measurement techniques to ensure that assessment instruments accurately reflect the latent traits they intend to

measure. Additionally, our study reveals the importance of cultural adaptation in psychometric testing, emphasizing that test anxiety manifestations may vary across populations. This insight encourages further refinement of psychological assessment tools to account for cultural and contextual differences, ultimately improving their generalizability and applicability across diverse student populations.

Secondly, from a practical perspective, this study provides valuable insights for educators, psychologists, and counselors who seek to identify and support students struggling with test anxiety. The strong reliability and validity of the WTAS suggest it can be effectively used in educational and clinical settings to screen for test anxiety and develop targeted interventions. However, the Wright map analysis indicates that the abilities of approximately half of the students are above the difficulty level of the items, suggesting that the scale may not fully differentiate among students with lower anxiety levels. To enhance its effectiveness, practitioners should consider complementing the WTAS with additional diagnostic measures, such as qualitative assessments, structured interviews, or physiological indicators of anxiety. Furthermore, the study underscores the need for interventions that specifically address varying levels of test anxiety, particularly among high-performing students who may experience anxiety in subtler yet academically impactful ways. Schools and universities can use these findings to implement structured support programs,

including cognitive-behavioral strategies, relaxation techniques, and test-taking skills training. Ultimately, integrating these evidence-based approaches into educational policies and counseling services can help mitigate test anxiety's negative effects, fostering improved academic performance and student well-being.

Limitation of the Study

Despite its valuable findings, this study has several limitations that warrant acknowledgment. The use of convenience sampling from a single public university in Nigeria limits the generalizability of results to the broader student population across various institutions and regions. Furthermore, the focus on first-year students excludes understanding of test anxiety patterns among students in later years of study. The cross-sectional design prevents causal inferences, necessitating longitudinal studies to explore the stability of WTAS scores over time and understand how test anxiety evolves throughout students' academic journeys.

While the study provides insights into the WTAS's psychometric properties in Nigeria, cultural differences may affect its applicability elsewhere, requiring further research in diverse settings. The Wright map analysis revealed that WTAS items inadequately target respondents at the extreme ends of the test anxiety spectrum, suggesting the scale may not fully capture the range of experiences, particularly for students with very high or low anxiety levels. The reliance on self-reported data

introduces potential response biases, which could be mitigated in future studies by incorporating objective measures or behavioral observations. Additionally, the lack of comparisons with other established test anxiety measures limits the evidence for the WTAS's concurrent validity. Lastly, the study did not extensively examine the impact of demographic variables on test anxiety, leaving room for a more nuanced understanding of how different factors influence anxiety levels among students. Addressing these limitations in future research will enhance the robustness of the WTAS and its applicability in diverse educational settings.

Recommendations for Future Studies

Based on the findings and limitations of this study, we propose several directions for future research. Future studies should include a more diverse and representative sample of students from various Nigerian universities and regions to enhance the generalizability of findings and provide a more comprehensive understanding of test anxiety across different contexts. Conducting longitudinal research would allow examination of WTAS score stability over time, offering insights into how test anxiety evolves throughout students' academic careers and potentially identifying the long-term effectiveness of anxiety-reduction interventions. To ensure the WTAS's applicability in diverse cultural contexts, further research should validate the scale in different countries and educational environments, making cross-cultural comparisons to determine its universal

applicability and identify any necessary culture-specific adaptations.

Given that the Wright map analysis revealed limitations in targeting respondents at the extreme ends of the anxiety spectrum, future studies should develop revised or expanded items to better capture the experiences of students with very high-test anxiety. To address potential biases in self-reported data, future research should incorporate objective measures or behavioral observations, combining self-report scales with physiological measures or performance-based assessments. Including comparisons with other established test anxiety measures will provide additional evidence for the WTAS's concurrent validity. Furthermore, future studies should explore the impact of various demographic variables on test anxiety and focus on developing and testing interventions designed to reduce test anxiety. By addressing these recommendations, future research can build on the current study's findings, enhance the robustness of the WTAS, and contribute to a more comprehensive understanding of test anxiety in diverse educational settings.

ACKNOWLEDGEMENT

The authors are deeply grateful for the support and assistance received from the School of Educational Studies, Universiti Sains Malaysia, Malaysia, and the School of General and Entrepreneurship Studies, Sule Lamido University Kafin Hausa, Nigeria, which enabled us to successfully complete this research paper. Their contributions are sincerely appreciated.

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Research Trends of Chinese-Korean Traditional Culture: A Bibliometric Analysis Based on CiteSpace

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ABSTRACT

Many experts have expressed interest in the traditional culture of Chinese-Koreans; however, there has been a dearth of bibliometric analyses in this field. This study seeks to undertake a comprehensive and practical investigation into the academic status and development trends within this domain, with the findings presented in a visually accessible format. This study utilizes CiteSpace to conduct a bibliometric analysis, systematically exploring the research trends in traditional culture among Chinese-Koreans over the past two decades, with a focus on identifying hotspots, emerging trends, and key contributors. Four hundred thirty-six articles (2004–2024) from the China National Knowledge Infrastructure (CNKI) database were analyzed for publication frequency, core authors, institutions, and research frontiers. The number of annual publications fluctuates but generally showing an upward trend. Chinese-Korean traditional culture has undergone stages of germination, rapid development, and steady progress. Yanbian University, the Yanbian Party School, and the Yanbian College of Education have emerged as the primary research institutions in this field. Notably, authors such as Zhang Xiaoyu, Cui Yingjin, and Piao Tingji made significant contributions. Current research hotspots predominantly revolve around cultural inheritance, cultural identity, and rural revitalization, among others. Promoting the traditional culture of ethnic minorities is a crucial endeavor for preserving the heritage of ethnic cultures and advancing ethnic education.

Keywords: Bibliometric analysis, Chinese-Korean, CiteSpace, traditional culture, visualization

ARTICLE INFO

Article history:

Received: 21 May 2024

Accepted: 08 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.13>

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INTRODUCTION

Culture is the blood of a nation and the symbol of a country. China is a unified multi-ethnic country. In the long-term social development, 56 ethnic groups have jointly created a colorful social culture and formed a diverse and integrated Chinese nation featuring equality, unity, mutual

assistance, and harmony among ethnic groups. Traditional Chinese culture, which has been passed down through a long history, holds profound cultural value. China has a diversified and integrated education system, which inherits the cultural heritage of all ethnic groups and protects its profound and splendid traditional culture. This can stimulate the vitality of ethnic minority development and strengthen exchanges and development between ethnic groups, ultimately realizing the great unity of the ethnic groups and the great rejuvenation of the Chinese nation.

This study delves into the Korean nationality in China. Terms include “Chinese-Korean,” “Korean nationality,” “Korean-Chinese,” and “Korean ethnic group in China.” If more specificity is needed, “Ethnic Koreans in China” can be used. They are a cross-border people who migrated to China from the Korean peninsula, where poor peasants, unable to endure the brutal oppression and famine of the feudal ruling class, moved in large numbers to the northeast of China from the mid-19th century onwards. They are not an indigenous people but are one of the oldest ethnic groups in China, and politically belong to one of the ethnic minorities of China and are citizens of the People’s Republic of China. However, as a people who migrated across the border, they are culturally very closely related to the Korean peninsula. According to the National Bureau of Statistics of China (2021), the total population of Korean nationality in China is approximately 1.7 million,

mainly distributed in the three northeastern provinces of Jilin, Heilongjiang, and Liaoning, with the largest settlement being the Yanbian Korean Autonomous Prefecture in Jilin Province. After the reform and opening-up, with the rapid development of China’s economy, more and more Korean population moved to the Beijing-Tianjin area and coastal economic open areas from the traditional residence of the three northeastern provinces. Due to advantages such as language and culture, some Chinese citizens of Korean nationality have also traveled to South Korea for work. Renowned for their sizable population and notably high levels of education, the Chinese-Korean community holds a significant place within China’s cultural landscape. The uniqueness of the traditional culture of Chinese-Korean is mainly reflected in language, art, cuisine, and etiquette. The core features are language and writing, which are important symbols of ethnic identity; music and dance, which show the ethnic character of art, such as farmer dance, folk songs, and traditional musical instruments; cuisine culture, represented by kimchi, cold noodle, and rice cake, which embody unique fermentation techniques and flavors; etiquette focus on the concept of the family and on traditional rituals, which highlight the cultural inheritance. Secondary characteristics, such as attire, architecture, religion, and productive culture, reflect a deep integration with nature and community. All these characteristics together constitute the rich connotation and unique charm of Chinese-Korean culture. Echoing the sentiments of American

cultural scholar Sahlins (1978), who argued that groups of people give meaning to themselves and the world in many ways. Generations of the Chinese-Korean group have actively contributed to the preservation and transmission of their culture, shaping distinct interpretations within the broader cultural landscape.

Nowadays, the traditional culture of the Chinese-Koreans lacks comparison and interaction from an international perspective, and most existing research is confined to areas where the Chinese-Koreans live in large numbers, such as Jilin, Heilongjiang, and Liaoning, ignoring the cultural expressions of diaspora areas. In addition, the role of ethnic education is ambiguous, fragmented, and decentralized, with a single research perspective and a lack of multi-level expression of traditional culture in daily life, educational practices, and cultural transmission mechanisms. Although policies and social support provide good external conditions for Chinese-Korean culture, it still faces multiple challenges, such as the assimilation pressure of mainstream culture (Gao, 2024), the declining interest of youths in traditional culture (Duan, 2020), and the impact of the development of the tourism economy on the traditional way of life (Cui & Piao, 2023), etc. The stability, completeness, and continuity of ethnic culture and national culture have been significantly impacted. The decrease in the use of ethnic languages (Ding, 2023) and the impact of globalization on traditional culture are also major problems facing Chinese-Korean culture (Liu, 2022). Therefore, an

in-depth exploration of the research status on the traditional culture of the Korean ethnic group in China is of great academic value and practical significance, with positive implications for the development and preservation of minority cultures, multiethnic cross-cultural understanding, and the construction of a learning society.

Research on traditional Chinese-Korean culture can be elucidated through the multi-dimensional perspectives of acculturation theory and ecological systems theory. Acculturation theory is the complex process of behavioral and socio-psychological adaptation that occurs when individuals or groups interact across cultures. This theory specializes in how ethnic or cultural groups adapt to the dominant cultural environment in a multicultural society, emphasizing that acculturation is an intrinsically causal phenomenon involving changes and processes triggered by cross-cultural encounters (Kunst, 2021). Over the past two decades, acculturation and development theories have steadily converged to provide an increasingly comprehensive approach to acculturation of migrating populations and ethnic minorities (Juang & Syed, 2019). Bronfenbrenner's (1977) ecological systems theory also plays a pillar role in the analysis of traditional culture. The theory states that the development of an individual is influenced by multiple systems such as microsystems, mesosystems, external systems, and macrosystems (Crawford, 2020). These systems surround and interact with the individual (Flynn & Mathias, 2023). The influence of multi-level systems

(e.g., policy, family, and community) on Chinese-Korean culture is explored based on ecosystem theory. Acculturation theory and ecological systems theory provide a strong supporting framework for this study by providing a multidimensional perspective and explanatory power. It not only helps to reveal the adaptation process of ethnic traditional cultures in modern society but also provides a strong theoretical support for in-depth research on the mechanism of cultural transmission.

The objective of this study is to utilize bibliometric methods to systematically review and analyze the research hotspots, journal distributions, key authors, research institutions, keywords, and emerging trends of traditional Korean nationality culture in China in the past two decades, and present the results in a visually comprehensible form, with a view to providing reference and guidance for future related research, thus contributing to the preservation and innovation of China's traditional minority cultures (Abuhassna, 2024).

This study utilizes CiteSpace (6.2.R4) visualization software to sort out the research on Chinese-Korean traditional culture. What are the major research hotspots in the study of the traditional culture of the Chinese-Korean ethnic group? What is the structure of knowledge and collaboration in this field? How have research trends evolved, and what are the potential directions for future development? The findings from the analysis will be presented systematically. CiteSpace, an excellent visual bibliometric software program (Ping et al., 2017) that provides the

most popular tool for co-citation analysis, was used to reveal shifts in research patterns (C. Chen et al., 2010, 2012), providing a foundation of references to support future works (B. Chen et al., 2022).

MATERIALS AND METHODS

Data Source and Search Strategy

In this study, the Chinese National Knowledge Infrastructure (CNKI) database served as the primary data source for cross-database searches. The search query is "Subject = Chinese-Korean with Ethnic Culture" within the time frame of 2004 to 2024. The time span was selected because the last two decades represent a critical period in the development of research on Korean ethnic culture in China. The data and information from this period are relatively complete, providing a reliable basis for trend analysis. Additionally, the availability of academic resources as well as the completeness of the data were also fully considered. The document type selected was academic papers, with no restrictions on the journal level. Themes are relevant and involve literature on traditional culture, customs, cultural transmission, and other related content of the Korean nationality in China. Subsequently, the retrieved results were curated. Remove literature on unrelated topics, literature that mentions Chinese-Korean but mainly discusses other topics. Eliminating any invalid papers, such as those lacking authorship, publication year, or deemed to have low relevance, including meeting notices. Following this curation process, a total of 436 valid papers

were identified. These papers were then exported from CNKI in RefWorks format and downloaded in text format for further analysis using CiteSpace (version 6.2.R4).

Analysis Tools

In this study, the scientific measurement method and content analysis method were combined, and CiteSpace software (6.2.R4) was used to visually analyze the diverse, time-sharing, and dynamic research hotspots and evolution trends of the sample literature. CiteSpace is an information visualization and analysis software developed by Chen Chaomei using the Java language (F. Xiao et al., 2017).

This method can elucidate the structure, rules, and distribution of scientific knowledge visually, forming a visual scientific knowledge map. Quantitative analysis demonstrates the developmental outlook and trends within a specific subject field (C. Chen et al., 2009).

After analyzing the study, CiteSpace (version 6.2.R4) was utilized to analyze research related to Chinese-Korean traditional culture spanning from 2004 to 2024. This study aimed to delineate the research hotspots and trends. In the generated figures, variations in node color signify changes over time, while node size is positively associated with frequency. Connecting lines indicate cooperation, co-occurrence, and citation among nodes. Node types are determined based on the analysis type, and nodes with centrality greater than 0.1 are denoted by purple circles on the outer edge.

Setting of Parameters and Data Analysis

Four separate folders, namely “Input, Output, Data, and Project,” were created for the project. Initially, the data was checked, revealing no duplicate files according to the results. The time was set from 2004 to 2024.

CiteSpace (6.2.R4) was used to input the downloaded documents as per the following procedures: (1) Time span: From 2004 to 2024, (2) The Year Per Slice is 1, (3) Node types: keyword, author, and institution, (4) Set threshold to $c=2$, $cc=2$, and $ccv=20$, (5) Set top N per slice to 50 by default. Shorter time slices provide higher temporal resolution, allowing subtle changes in research hotspots and trends to be observed. The selection of node types is based on the key objectives of the research, by analyzing the nodes to understand the research hotspots and knowledge maps in the field. When setting the thresholds, the higher criteria of citation frequency and co-occurrence frequency were chosen. Ensure that the literature and keywords included in the analysis have a high academic impact and representativeness.

Finally, the quantitative data results are comprehensively analyzed using the content analysis method, yielding insights into the research process, research hotspots, and research frontiers of Chinese academic circles on Korean ethnic culture, through consideration of factors such as ease of data processing and user familiarity. Statistical charts were drawn using Microsoft Office Excel 2019, which is suitable for additional analysis and presentation of small-scale data

due to its flexibility and efficiency, ease of customizing charts and integrating data from multiple sources, and intuitive operation.

RESULTS

Number and Research Trends of Articles Published

Statistics on the number of published papers in a certain field over a period can illustrate the research’s popularity. As depicted in Figure 1, this study conducts a statistical analysis of the number of published papers based on data retrieved from 436 papers. As observed from the figure, research on Chinese-Korean ethnic culture has exhibited an overall upward trend over the past two decades, reaching a peak in 2013. In 2013, the Chinese Government issued a series of cultural protection policies to promote the inheritance and protection of minority cultures. The central government arranged 46.4 billion yuan in transfer payments to ethnic minority regions to support their economic development.

Meanwhile, under the influence of the globalized context, Chinese-Korean culture is interacting more frequently with other cultures, and academic interest in cross-cultural research has gradually increased. This has contributed to 2013 becoming an important point in the study of traditional Korean nationality culture in China, and the quantity of academic literature and the quality of research have shown significant improvement. Hence, the evolutionary stage of this research can be divided.

Embryonic stage (2004–2009): The number of published papers was 50, accounting for 11.4%, and the research content was scattered and not systematic. In 2008, the General Office of the Ministry of Education and the General Office of the State Ethnic Affairs Commission issued the Notice on Effectively Conducting Ethnic Unity Education in Primary and Secondary Schools. The General Office of the Ministry of Education and the General Office of the State Ethnic Affairs Commission jointly

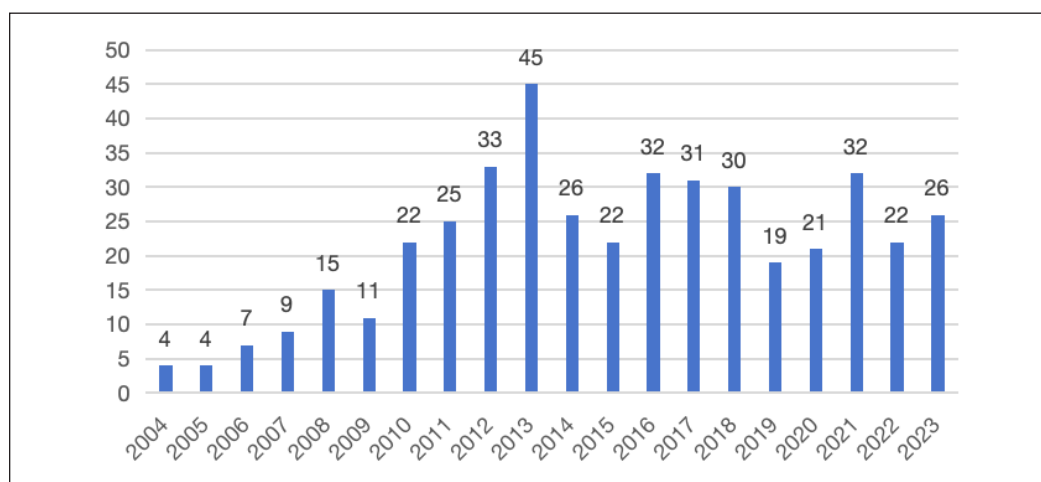


Figure 1. Annual trends in publications

issued the Guiding Outline of Ethnic Unity Education in Schools (Trial), requiring primary and secondary schools nationwide to establish ethnic unity education courses. This outline has become a crucial foundation for further strengthening national unity education efforts in schools, setting the groundwork for this stage.

Rapid development stage (2010–2013): The number of published papers was 125, accounting for 28.6%. Focus on specific areas of national culture inheritance, such as cuisine culture, sports culture, national language, national religion, and architectural culture. In May 2013, the Ministry of Education, the Ministry of Culture, and the State Ethnic Affairs Commission jointly issued the Opinions on Promoting the Inheritance and Innovation of Ethnic Culture in Vocational Colleges, which outlined arrangements for the inheritance and innovation of ethnic culture in vocational colleges. It emphasized the effective integration of teaching and educating people in vocational colleges, advocating for the integration of ethnic culture into the entire educational process. In formal education, more attention was directed towards inheriting the traditional culture of ethnic minorities to provide development opportunities and stimulate the progress of ethnic minorities.

Stable and progressive stage (2014–2024): The number of published papers reached 261, accounting for 59.8%, indicating further advancements in previous fields, with research trending towards systematic approaches. In 2015, the State

Council issued the Decision on Accelerating the Development of Ethnic Education, emphasizing the promotion of cultural integration and innovation among ethnic groups. Guided by advanced socialist culture, efforts were made to promote the shared Chinese culture among all ethnic groups, while also preserving and promoting the fine traditional cultures of ethnic minorities, establishing spiritual homes shared by all ethnic groups. Policy support was provided for the study of minority culture during this period.

Analysis of Published Journals

According to the statistical analysis of this paper, 436 valid articles were published in 141 journals. According to the discrete law of Bradford literature, most key literature is usually published in a small number of core journals (Zhang et al., 2009).

The Bradford core area quantity calculation method is used, that is, $r_0 = 2 \ln(e^E * Y)$, where r_0 is the number of cores, E is the Euler coefficient, $E = 0.5772$, and Y is the number of papers in journals with a maximum volume of 14. Calculated $r_0 = 2 \ln(e^{0.5772} \times 14)$, that is, there are six journals in the core field. These six journals accounted for 4.2% of the total number of journals counted.

A total of 63 articles were published in the top 10 journals, constituting 14.4% of the total number of journals (Table 1). Upon observation, it can be concluded that most of these journals focus on ethnic studies, with research on traditional ethnic culture predominantly concentrated in

Table 1
Top 10 high-yield journals with the number of publications

Journal	Number of Articles
Journal of Yanbian University (Social Science Edition)	14
Journal of Yanbian Party School	8
Heilongjiang Ethnic Series	7
Chinese Nationalities Expo	6
Journal of Yanbian University of Education	6
Talent	5
Popular Literature and Art	5
Journal of Liaodong University (Social Science Edition)	4
Voice of the Yellow River	4
Research on Manchu Studies	4

ethnic regions such as Yanbian Korean Autonomous Prefecture and Heilongjiang Province. Notably, the Yanbian University Journal (Social Science edition) ranked first in the number of publications, followed by the Yanbian Party School Journal and the Heilongjiang Nationality series, which exhibited higher publication rates.

Analysis of Authors and Cited Authors

The author of the paper serves as the primary entity in the research, and analyzing author statistics in the research field can provide insights into the distribution patterns of key authors, prolific authors, and collaborative relationships among authors.

Utilizing CiteSpace, the Year Per Slice was set to 1, “Authors” were selected as Node Types, and “Pathfinder” was chosen for Pruning. “Pruning sliced networks” and “Pruning the merged networks” were

selected, while all other values remained default. CiteSpace was then executed to generate a visual network map of authors engaged in the study of Chinese-Korean culture, followed by a structured analysis of the author network map through natural clustering. The analysis revealed that a total of 389 authors have contributed to research related to Chinese-Korean culture. Cooperation among authors exhibits limited inter-institutional and inter-organizational collaboration (Figure 2). Currently, only a few collaborative teams exist, with many authors still publishing independently and producing a small number of papers. This limitation hampers the further advancement of research on the traditional culture of ethnic minorities, indicating a need to strengthen cooperation within this research field.

The basis for measuring key authors generally includes the number of publications and the number of citations. According to Price’s Law in bibliometrics, the critical value M of the number of publications by an author is used to determine the most productive author in the field. The calculation formula is as follows: Calculation formula $M=0.749(N_{max})^{1/2}$. M refers to the minimum number of publications, and N_{max} refers to the number of papers by the author who published the most papers in the corresponding year. When the number of published papers reaches M or more, the author is a prolific author (Xu & Li, 2018). Calculated from relevant data, $M=3$, and authors with ≥ 3 publications are listed here, as shown in Table 2.

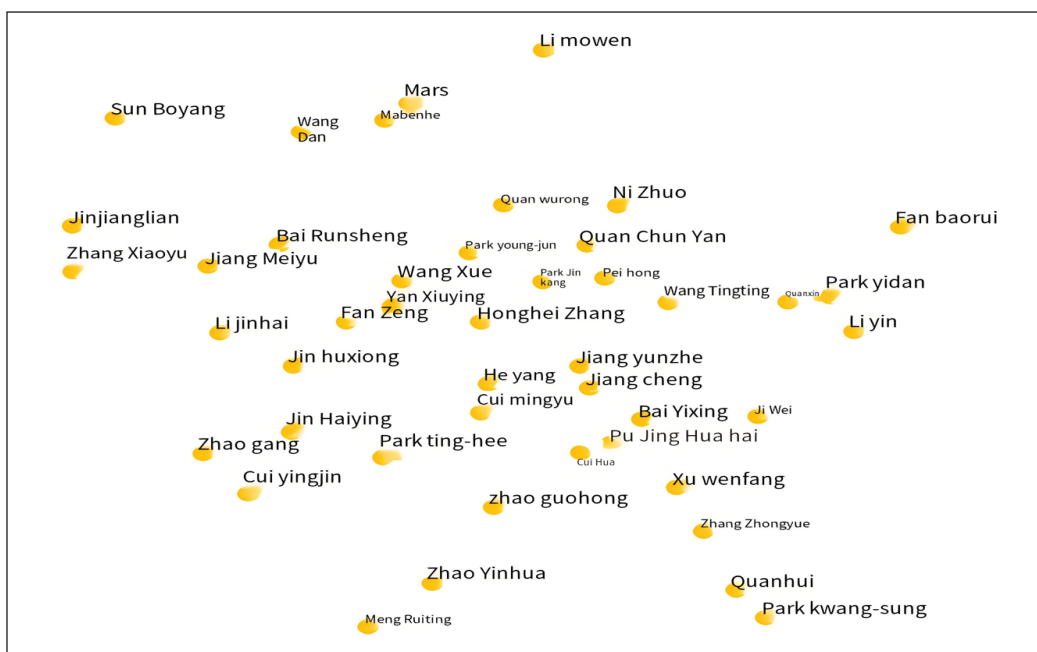


Figure 2. Map of authors of Chinese-Korean culture studies

Table 2
Top 10 prolific authors of Chinese-Korean culture research

Authors	Count	Year
ZhangXiaoyu	5	2016
CuiYingjin	4	2007
PiaoTingji	4	2008
NiZhuo	3	2015
CuiMingyu	3	2009
PiaoYidan	3	2013
LiYing	3	2015
JinHaiying	3	2015

Analysis of Institutional Cooperation

In the CiteSpace (6.2.R4), Node Types selects “Institution,” Time Span is “2003–2024,” and configuring the Threshold as “Top50 Per Slice.” The “Pathfinder” algorithm network was chosen for Pruning

to generate the co-occurrence map of research institutions, as shown in Figure 3.

From the co-occurrence map of research institutions, it is evident that departments specializing in ethnology within major universities, including ethnic colleges, are the primary contributors to research in the field of traditional culture among ethnic minorities. However, there appears to be limited collaboration among ethnic colleges and universities.

Notably, the journal of Yanbian University emerges as the largest node on the map, indicating the highest number of published papers, with statistical data revealing a total of 14 papers (Figure 4). As a key institution in Chinese-Korean cultural studies, Yanbian University benefits from its proximity to Chinese-Korean

communities, allowing researchers easier access to fieldwork and archival materials. As a result, it serves as a significant driving force in the study of Chinese-Korean traditional culture and contributes to related

research endeavors concerning the Korean nationality group.

Through the analysis of the number of articles published in each journal, it is apparent that ethnic universities serve as

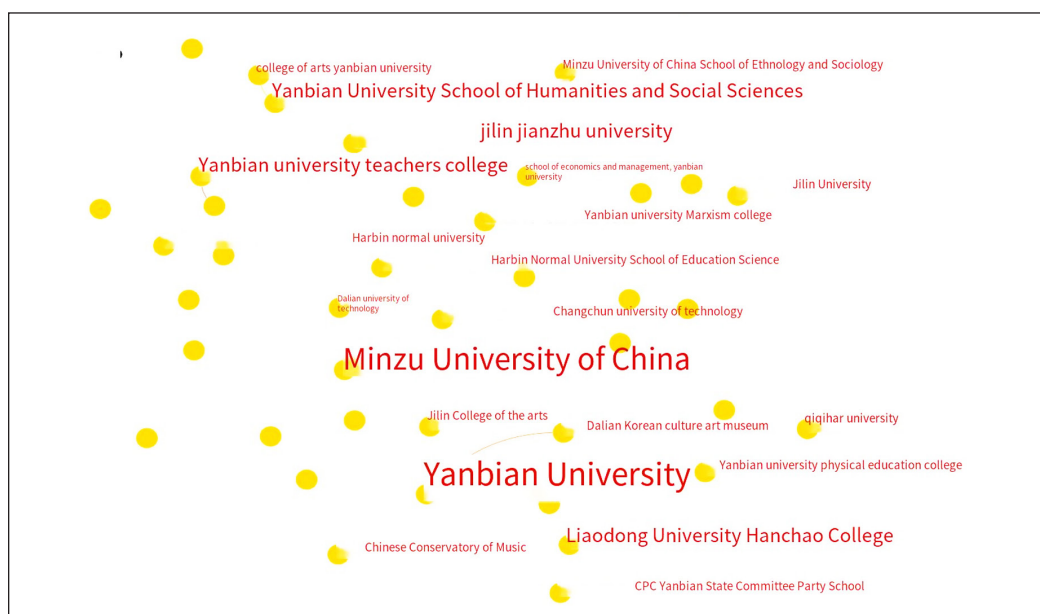


Figure 3. Distribution of research institutions

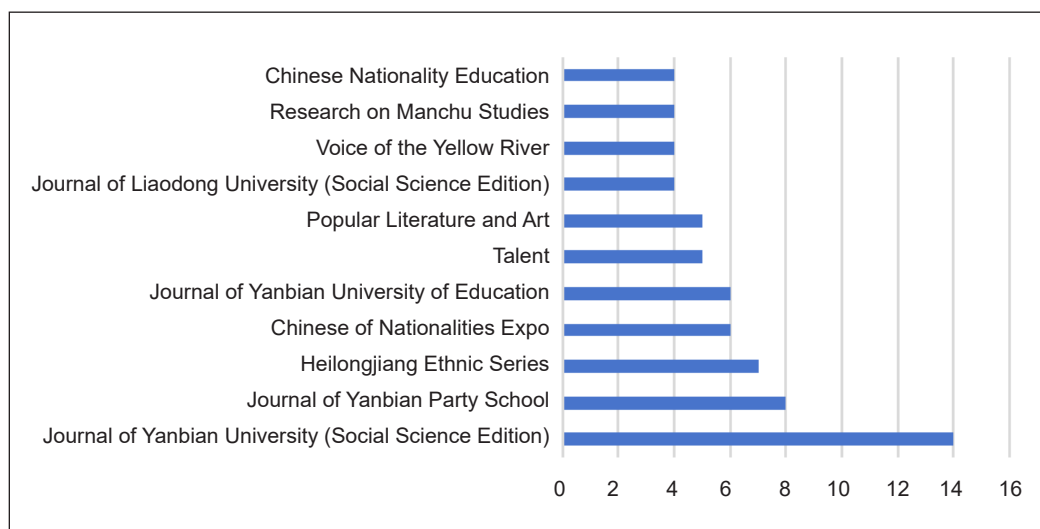


Figure 4. Number of publications in journals

the main research entities in the field of ethnic traditional culture research. They are complemented by comprehensive universities located in border areas and ethnic regions.

The size of the text in the figure is proportional to the number of documents issued by the institution, and the larger the text is, the higher the overall frequency of the institution. The lines between research institutions represent cooperation, and the darker the lines, the higher the frequency of cooperation, and the thicker the lines, the higher the frequency of co-occurrence.

The institutions conducting research related to Chinese-Korean are primarily concentrated in the Yanbian Korean Autonomous Prefecture of Jilin Province, suggesting that such research exhibits distinct regional characteristics. However, the nodes depicted (Figure 3) appear relatively scattered and exhibit minimal correlation, indicating that various institutions involved in the research on Chinese-Korean traditional culture operate relatively independently throughout the research process and engage in limited collaboration.

Keyword Co-Occurrence Analysis

Keywords serve as the central overview of a paper and analyzing them provides insights into the article's topic. Conducting statistical analyses on the frequency of keywords systematically and objectively captures the research dynamics and development trends within the field (M. Xiao et al., 2009).

Process the literature data of Chinese-Korean traditional culture downloaded

by CNKI, perform cluster analysis on keywords, select "Keyword" as the Node Type, set the Time Span as "2003–2024," set the single time partition as one year, that is, 20 single time partitions, and select "Title," "Abstract," "Author Information" as the source of clustering words. "Keyword," "Node Type," the clipping line is set as the path detection algorithm, and then the clustering map is obtained.

Word co-occurrence network analysis, also known as co-word analysis, is a text content analysis technique. By analyzing the forms of item pairs (word or noun phrase pairs) in the same text topic, it confirms the relationship between related topics in the subject field represented by the text, and then explores the development of the subject (Pan & Wang, 2011).

The keyword emergence map formed by CiteSpace can obtain the difference information between previous research hotspots and current research hotspots, as shown in Figure 5. Keywords with high frequency in relevant research literatures include "Chinese-Korean," "national culture," "protect," "Yanbian area," "cultural heritage," we can see that the research of Chinese-Korean ethnic culture mainly focuses on cultural inheritance, rural revitalization, and other aspects, indicating that these issues are the hot spots in the research field.

The size of the keyword co-occurrence frequency is positively correlated with the font size of the node represented by the word in the keyword knowledge graph. In the keyword knowledge graph, a circle

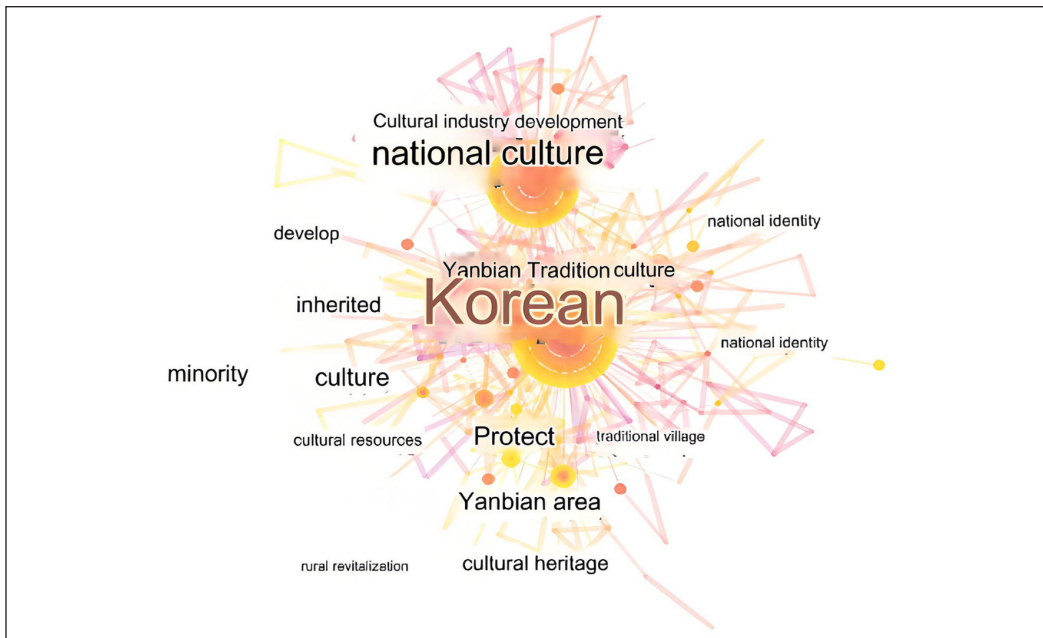


Figure 5. Keyword clustering knowledge map

represents the keyword node, and the larger the circle, the higher the frequency of the corresponding topic. The color and thickness of the node ring indicate the occurrence period, that is, the thicker the color ring in the circle, the higher the frequency of the color in the corresponding year. This can directly show the relationship and distribution of different topics in the research of Chinese-Korean traditional culture.

Keywords that appear simultaneously in an article are termed keyword co-occurrence, which measures the affinity between two words. This affinity is reflected by the intermediary centrality index, indicating the intermediary status of the keyword in the keyword network. The magnitude of the intermediary centrality value illustrates the role of words in the evolutionary process, with larger values typically indicating greater

significance. Generally, keywords with a centrality exceeding 0.1 are considered more important. As indicated in Table 3, only “Chinese-Korean” and “ethnic culture” in the map have intermediary centrality values exceeding 0.1. This suggests that the research field of Chinese-Korean ethnic culture is relatively broad, with a weak correlation among various topics.

Since keyword cluster analysis scientifically reflects the hot topics in the research field, this study conducts keyword cluster analysis on the target literature data to explore the research topic of traditional ethnic minority culture more clearly. The number of clusters in the analysis is set to 10. Using the keyword clustering algorithm of CiteSpace visual data analysis software, the target data is processed, and 10 high-frequency keyword clustering points are

Table 3
Statistical table of keyword frequency and centrality

Centrality	Year	Keywords	Frequency
0.74	2004	Chinese-Korean	155
0.32	2006	Ethnic Culture	71
0.05	2010	Heritage	20
0.05	2012	Yanbian Region	12
0.03	2013	Cultural Inheritance	12
0.03	2007	Sports Culture	5

obtained, as shown in Figure 6. Clusters are formed from closely related keywords, and representative keywords are extracted as new points of clustering.

In literature cluster analysis conducted by CiteSpace, it is generally accepted that a cluster module value (Q value) greater than 0.3 indicates significant cluster structure. If the average silhouette value (S value) of the cluster is greater than 0.5, the clustering is considered reasonable, and if it exceeds 0.7,

the clustering is considered convincing. In the keyword clustering of target literature data conducted in this paper, the Q value is 0.6586, and the S value is 0.9348, indicating that the clustering obtained in this study is effective.

Research Frontiers

Research frontier refers to a set of dynamic probabilities and potential research issues that emerge (C. Chen et al., 2009). In this

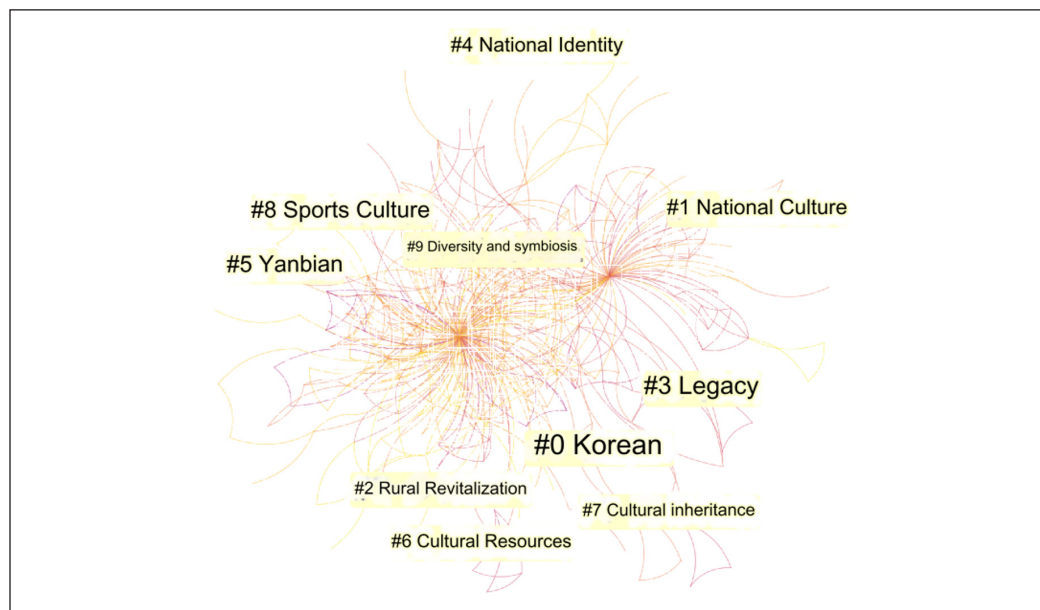


Figure 6. Keyword clustering analysis

study, the definition of research frontier emphasizes the characteristics of new trends and bursts, which measure the rate of change in the frequency of literature citations or the occurrence of keywords. Emerging keywords indicate the hotspots and focal points of academic research within a specific timeframe.

To further analyze the research frontiers in the field of Chinese-Korean traditional culture, this study utilizes the keyword breakout detection function of CiteSpace to detect breakout words in the target literature data. By selecting “Burcontrol” in the Control Panel and clicking “Refresh” and “View” successively, a keyword knowledge map is generated. “Begin” and “End” respectively represent the year when the keyword starts and ends, while “Strength” represents the intensity of emergence. The larger the value, the higher the heat of the keyword (Figure 7).

Through the keyword emergence map generated by CiteSpace, insights into the differences between previous and current research hotspots can be obtained. As depicted in Figure 7, research on Chinese-Korean traditional culture from 2007 to 2008 predominantly focused on the study of transnational ethnic groups. For instance, scholars like Jin Bingmin explored the multiple identities of transnational ethnic groups, particularly centering on the research of Chinese-Korean identity (Jin, 2007). From 2008 to 2011, the research emphasis shifted towards the national identity of ethnic minorities. Pu Guangxing’s study (Piao, 2009) examined the national, ethnic, and cultural identity of Chinese-Korean workers in South Korea.

With changes in national policies, particularly the release of the Opinions of the CPC Central Committee and the State Council on Comprehensively Promoting

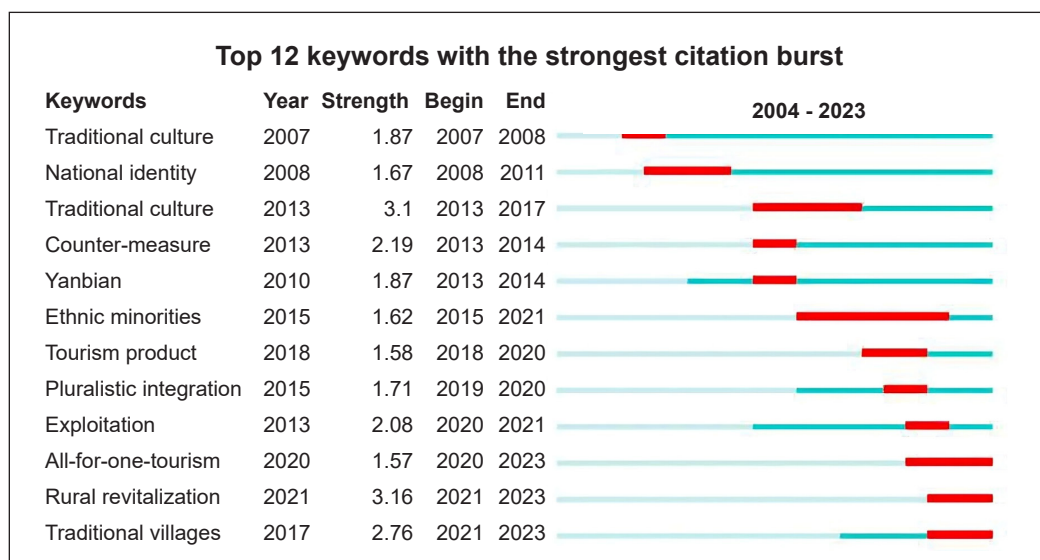


Figure 7. Burst analysis of keywords

Rural Revitalization and Accelerating the Modernization of Agriculture and Rural Areas on February 21, 2021, the focus of relevant research in recent years has shifted towards rural revitalization and traditional villages. For example, scholars like Liu Yetong have conducted research on rural revitalization and the construction of border ethnic villages in Yanbian Korean Autonomous Prefecture.

CONCLUSION

Through a quantitative analysis of the research process in ethnic studies, focusing on Chinese-Korean relations over the past two decades, it is anticipated that future research in this field will exhibit a multidirectional alliance of research subjects. This calls for advocating the diversification of research paradigms and promoting the comprehensiveness of research content.

Focus on the multi-directional association of research subjects: Through analysis of authors and institutions, it is evident that research institutes focusing on the Chinese-Korean ethnic group are primarily concentrated in colleges, universities, and education departments across the three Northeast provinces, particularly in Yanbian Korean Autonomous Prefecture of Jilin Province, where the Chinese-Korean ethnic group is densely populated. Most researchers comprise college educators and postgraduates, with relatively lower participation from teachers in ethnic elementary education schools. This indicates a lack of inter-school, inter-regional,

and inter-level cooperation in Chinese-Korean ethnic studies, with no closely knit research cooperation network established. Consequently, it is recommended that researchers strengthen horizontal linkage, expand research capabilities, and promote multifaceted cooperation to facilitate resource sharing and information exchange, thereby achieving a synergistic effect in collaborative research. Additionally, it is proposed to foster collaboration among government entities, universities, and ethnic basic education schools to form a cohesive research community, leveraging the unique insights and contributions of ethnic members in Chinese-Korean ethnic research to provide comprehensive, firsthand information and inject vitality into the field.

Advocate for the diverse integration of research paradigms: The analysis of Chinese-Korean traditional culture using CiteSpace reveals that the research paradigm in ethnic culture remains distinct from that of other humanities and social sciences, prioritizing conceptual frameworks over methodological approaches. While this research field has departed from traditional qualitative methods, there is a slight bias towards specific research methodologies, with limited utilization of mixed research methods. Moving forward, it is imperative to advocate for the simultaneous adoption of multiple research methods. By embracing perspectives from positivism, interpretivism, criticism, and other paradigms, researchers can achieve a deeper understanding and grasp of national culture within the context of school-based curriculum.

Promote the comprehensive development of research content: Through cluster analysis of literature conducted by CiteSpace, it is evident that the inheritance and preservation of Chinese-Korean traditional culture emerges as a prominent research theme in this field. Scholars have concentrated on topics such as the development of Korean-inhabited regions, the preservation of ethnic minority cultures, and the cultivation of unique original ecological cultures within ethnic minority communities. In recent years, there has been a notable trend in minority culture studies towards integration with national rejuvenation and rural revitalization initiatives, evolving towards themes of cultural self-assurance and cultural identity.

The study results are of great significance in guiding cultural policies and education. At the policy level, it is necessary to strengthen the inter-institutional cooperation mechanism, promote the participation of grassroots teachers and cultural inheritors in research, develop ethnic cultural industries in conjunction with rural revitalization, and simultaneously enhance policy design for cultural identity and cultural self-confidence. At the educational level, it is necessary to develop a diversified ethnic curriculum system, promote the cross-disciplinary education model, enhance the teachers' ethnic cultural literacy, and strengthen the inheritance of ethnic cultures at the stage of basic education. Additionally, through the combination of policy support and educational practices,

the synergistic development of cultural protection and heritage can be realized.

Implications of the Study

As an important part of the world's minority cultures, the study of traditional Chinese-Korean culture is of great significance to cultural cognition, cultural communication, academic innovation, and economic development.

First, Chinese-Koreans contribute a unique perspective to the world's cultural diversity with their unique cultural traditions and historical inheritance. Studying the development hotspots and trends of the traditional culture of Chinese-Korean helps to enrich the cognition of the world's cultural diversity and highlight the unique value of minority cultures in global culture. The process of acculturation, which involves how Chinese-Koreans adapt to dominant cultural environments, is integral to this dynamic and offers new insights into the broader process of cultural exchange and integration.

Secondly, this study promotes understanding and communication between different cultures in China and the world. Against the background of globalization, understanding and respecting minority cultures not only contributes to cross-cultural understanding and dialogue but also has important practical significance for cultural tolerance and coexistence in an internationalized society. The ecology system, which encompasses influences from community dynamics, family, and broader societal contexts, plays a critical

role in shaping how cultural traditions are maintained and transmitted across generations.

In addition, this study provides new perspectives and data to global academia, expanding research in ethnography, cultural studies, and sociology. By exploring the multi-level impact of acculturation and the ecology system on Chinese-Korean culture, it inspires other regions to study their ethnic minority cultures, advancing cultural preservation.

Finally, it explores how minority cultures balance inheritance and innovation in the context of modernization while also examining their potential value in cultural tourism and economic activities. By highlighting their cultural and economic significance and development trends, it provides a valuable reference for the growth of the cultural industry.

Overall, this study analyzes authoritative data to deepen the knowledge and understanding of Korean Chinese cultures and promote cultural identity, social integration, and multicultural coexistence. By integrating both acculturation and ecology system perspectives, this research offers a comprehensive approach to understanding the dynamics of cultural preservation and innovation in modern society.

Recommendations and Limitations for Future Research

Art forms are an important way for members of ethnic minorities to express their emotions and pass on their history and

culture. The Uyghur nationality in China is known for its unique music and dance, particularly the Twelve Mukam, which has been listed as an intangible cultural heritage by the United Nations Educational, Scientific and Cultural Organization (UNESCO). It is like the Farmer Dance of Chinese-Korean and is characterized by its distinctive ethnic features. Tibetan culture in China is renowned for its distinct religious and ethnic characteristics, as reflected in unique expressions of architecture, painting, and Buddhist rituals. All ethnic minorities maintain a common cultural vitality through their unique art forms, and the cultural expressions of different ethnic groups have their distinctive features.

With the rise of digital humanities and interdisciplinary research, big data analysis and social media text analysis, we can study the dissemination and development of Chinese-Korean culture. These emerging research approaches offered new perspectives on the modernity of Chinese-Korean ethnic culture.

In recent years, the Chinese government has introduced a series of policies and measures to support the inheritance and development of ethnic minority cultural transmission. Cultural exchanges between Chinese-Koreans, the Korean Peninsula, and other countries with Korean diasporas have become more frequent. Cross-cultural adaptation, cultural identity, and cultural integration have emerged as key academic focuses in recent years. Under the influence of new media and the Internet, Chinese-Korean youth have begun to

transmit Korean nationality culture through innovative methods.

Against the backdrop of the dual challenges of heritage and preservation of Chinese-Korean traditional culture, it is important to focus on cultural heritage and multicultural education and preservation. Support projects for the protection and transmission of Korean national cultural heritage through the establishment of special funds and favorable policies. Community-led cultural inheritance projects are being promoted in areas where Chinese-Koreans live in large numbers, enhancing the cultural identity and pride of members of the ethnic group.

The education sector strengthens multicultural education in primary, secondary and higher education, especially on ethnic minority cultures. It has increased the use of digital means in cultural education by incorporating Chinese-Korean culture into national and local curriculum standards, providing professional training for teachers, and developing relevant teaching resources. To help understand and respect minority cultures and protect cultural diversity.

By providing these specific policies and educational recommendations, we aim to provide practical references for cultural policymakers and educators and further enhance the social impact of our research findings.

Due to the limited amount of data, there are inherent limitations in both the depth and breadth of the analysis. Therefore, it is essential to make appropriate adjustments and enhancements in future studies. Despite

these limitations, this research provides a preliminary analysis of the hotspots and frontiers in the field of traditional minority culture research, offering valuable insights for scholars engaging in further research in this area.

ACKNOWLEDGEMENT

The author would like to express deepest gratitude to the supervisor, Aminuddin bin Hassan, and advisor, Siti Sabihah Ghazali, for their invaluable guidance, constructive feedback, and continuous encouragement throughout the process of completing this work.

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Sacred Symbolism in the Ritual Healing Ceremony of *Magombok*: An Analysis of the *Panangsang* Dance

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ABSTRACT

Panangsang, a sacred dance integral to the *Magombok* ritual, serves as a spiritual healing ceremony for the Bajau Laut community in Semporna, Sabah. This mesmerizing performance is believed to bridge the gap between the physical and ethereal realms, facilitating communication through symbolic movements that embody the essence of the healing process. This study aims to meticulously analyze each gesture within the *Panangsang* dance to unravel the intricate tapestry of symbolic meanings woven throughout. Employing a qualitative approach rooted in ethnographic methodology, this research encompasses three distinct healing ceremonies involving separate patients. Each movement is scrutinized using Barthes' Order of Signification model to identify authentic and culturally relevant symbolic patterns and their meanings. The findings reveal seven animal-inspired movements, including representations of the Eagle, Rooster, Stingray, Turtle, Spider, Python, and Cobra. These zoomorphic gestures symbolically convey that the patient is afflicted by sorcery or ancestral curses. Furthermore, the interpretation of these symbols reflects the profound spiritual values deeply entrenched in Bajau Laut mythology. The significance of this study lies in its elucidation of the ceremony as both a medium for artistic expression and a conduit for conveying

spiritual messages integral to the healing process.

The implications of this research contribute to a more nuanced understanding of symbolism within traditional healing rituals, reinforcing the theory that sacred elements play a crucial role in facilitating communication between humans and the spiritual realm.

Keywords: Bajau Laut, healing ritual, *Magombok* ritual, *Panangsang* dance, sacred symbolism

ARTICLE INFO

Article history:

Received: 09 August 2024

Accepted: 14 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.14>

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INTRODUCTION

The Bajau Laut community in the Semporna region of Sabah holds a deep-seated reverence for the ancestral spirit worship (Nor & Hussin, 2019). This veneration is a central element in a sacred healing ritual, serving as a therapeutic bridge connecting the spiritual and physical realms (Pisali et al., 2017). The sacred value embodies a harmonious union between the physical and spiritual worlds, wherein ancestral spirits are believed to play a vital role in enhancing individual spiritual well-being.

This healing ritual, known as 'Magombok,' represents a ritualistic worship of ancestral spirits to treat illnesses stemming from mystical and magical origins (Pisali et al., 2017). Its execution is revealed through a rich and intricate structure that encompasses various elements, such as offerings (food and ritual props), dance, music, costumes, invocations, and captivating symbolic performances (Husin et al., 2020; Zainal et al., 2021). These elements coalesce into a platform to summon ancestral spirits and manifest them in the physical realm, conveying healing messages.

The ritual spans three days, comprising ceremonies for (1) spiritual purification, (2) preparation of offerings, and (3) the summoning of spirits. The spiritual purification ceremony involves two customary practices: *Magpandi Pajati* and *Magulung Bendera*. *Magpandi Pajati* entails bathing the patient beside the *Pajati* (cannon)—a heirloom legacy from their ancestors. Conversely, *Magulung Bendera* denotes the act of raising a flag, signifying

that an individual has been purified for the purposes of healing.

In the offering preparation ceremony, two customary practices must be executed: *Magpaili Bahauh* and *Maggaddun Tapung Buas*. The *Magpaili Bahauh* custom involves preparing the essential ingredients for the ritual offerings: upland rice, cooked sugarcane to produce sugar, and coconuts used for extracting oil. This is followed by the *Maggaddun Tapung Buas*, which processes these ingredients into three obligatory dishes for the spirits, known as *Pannyam*, *Pollo-Pollo*, and *Durul*.

In the spirit summoning ceremony, two principal customs are observed: 'Magtagungguk' and 'Magigal.' These customs are crucial as they function as methods of invoking the presence of ancestral spirits. Both are performed simultaneously, with ritual practitioners dancing three specific traditional dances at the outset: *Igal Tabawan*, *Igal Lellang*, and *Igal Limbayan* (Rahman et al., 2023). Concurrently, musicians perform the *magtagungguk* ritual by playing traditional instrumental ensembles, such as *Kulintangan*, *Tambul* (drums), and gongs, to accompany the dances.

This sacred healing ritual is led by *Kalamat*, the shaman, who occupies the highest rank and is deeply revered within the Bajau Laut community, especially regarding matters of customary practices and healing rituals. *Kalamat* is believed to possess the ability to connect and communicate with ancestral spirits (Pisali et al., 2017). Their role is to interpret subtle signs from these spirits, which are perceived as directives

for the healing process guiding the patient's recovery. Thus, the Bajau Laut community places immense faith in *Kalamat's* wisdom and abilities to restore health and well-being (Zainal et al., 2018).

While the *Magombok* encompasses various customary structures, the true medium of healing occurs solely when the *magtagungguk* and *magigal* customs are performed. These two customs act as an initial exposition connecting practitioners with the spirit realm, whereas the other customs serve merely as conditional elements supplementary to the overall ceremonial narrative. The process begins with auditory elements from the *tangungguk* rhythm, which serves as a medium for spirits to possess the dancers during the performances of *Igal Tabawan*, *Igal Limbayan*, or *Igal Lellang*. The presence of the spirit is signified when the performer enters a trance state, exhibiting symbolic movements that are often enigmatic.

These symbolic movements, known as the *Panangsang* dance, signify the communication that has transpired between *Kalamat* and the spirit (Pisali et al., 2017). Such communication is deemed sacred as it conveys messages regarding the origins of ailments and descriptions of healing methods. Each movement bears a distinct pattern and symbolic significance, varying according to the type of spirit that possesses the ritual performer. However, the challenge lies in interpreting these movement patterns, necessitating a profound understanding from *Kalamat* to ensure that the messages conveyed by the spirit are accurately translated.

In the context of this ritual, each movement pattern possesses an implicit meaning related to the sources of illness and the healing methods recommended by the spirit possessing the ritual performer. The uniqueness of this communication system rests with *Kalamat*, who serves as the intermediary in interpreting the messages conveyed through these dance movements. Nonetheless, the interpretation of these movement patterns is subjective and relies entirely on *Kalamat's* skill and experience, who often lacks systematic documentation to ensure the continuity of this knowledge. The absence of movement codification complicates the understanding of this sacred communication, particularly among younger generations increasingly distanced from traditional ritual practices. Furthermore, socio-cultural changes and the influence of globalization have led to the erosion of skills necessary for interpreting movement patterns, placing this tradition at risk of extinction unless it is systematically recorded and analyzed academically.

Therefore, it is imperative for this study to analyze and interpret the movement patterns within the *Panangsang* dance as a form of sacred communication system operating within the healing rituals of the Bajau Laut community, effectively serving as a healing process. This endeavor also entails defining signs associated with their myths and beliefs. Thus, the scope of this study is confined to the sacred symbolism of dance movements, focusing on elucidating the function and efficacy of *Panangsang* in the execution of the *Magombok* ritual.

LITERATURE REVIEW

Sacred symbolism in ritual ceremonies is often regarded as a medium of communication that conveys divine entities, spiritual concepts, or cosmological principles considered sacred and interconnected. According to previous studies, these symbols are highly complex because they not only serve as visual or ritualistic communication tools but also play a significant role in shaping human relationships with the metaphysical world. For instance, Eliade (1957/1987) emphasizes that symbols in rituals function as forms of sacred communication containing dual dimensions: as manifestations of transcendent reality and as channels of communication between humans and the supernatural realm.

Turner (1969) emphasized that rituals are rich in symbolic meaning and function to connect individuals or communities with the supernatural. He viewed rituals as complex communication processes where symbols convey profound meanings. This communication occurs not only verbally but also through actions, movements, and the use of symbolic objects. Turner introduced the concept of “*communitas*” to describe the sense of unity and equality experienced during rituals, highlighting the transformative power of these symbolic acts in reinforcing societal norms, values, and beliefs.

This concept of symbolism carries multiple layers of meaning and can be interpreted in various ways. As Fenn (1974) noted in Geertz’s explanation, symbols in rituals often contain different meanings depending on their context and intended

audience. Geertz further emphasized that symbolic rituals are a form of cultural text that requires reading and interpretation to understand the deep meaning of a particular society. For instance, a symbol may convey sacred meaning in a religious context but social significance in a community context.

This narrative is upheld by researchers who have focused on the ritual practices of the Bajau Laut ethnic group. As Yakin (2017) observed, the Bajau Laut community maintains its cultural identity through rituals and symbolism that reflect its beliefs and traditions. According to Yakin, these symbols are non-verbal, and the ritual space itself serves as a direct and indirect means of communication. In this ritual, it is crucial to preserve the cultural identity of the Bajau Laut community, particularly in the context of diaspora and modernization (Hussin, 2009).

According to Hussin and Santamaria (2008), the sacred elements in the beliefs of the Bajau Laut community comprise behavioral practices and the execution of ritual equipment. This includes musical instruments, dance, food offerings, incantations, and the ritual structure itself. However, the primary determinants of symbolic representation refer to dance (Zannie, 2013). The *Magpa-igal Jin* dance is described as a medium of communication between the spirit and physical worlds (Pugh-Kitingan et al., 2005). This statement corresponds with the opinion expressed by Nor and Hussin (2019), who stated that dance in Bajau rituals is the instrument for connecting the living with the spiritual realm. Each movement and rhythm in this

dance carries deep symbolic meaning, illustrating the close relationship between participants and their ancestral spirits.

Pisali et al. (2017) previously conducted research that revealed that only specific dance movements giving special meaning will occur if patients or practitioners have changed from patterned dance to trance dance. They explain trance as a dance that occurs when practitioners reach a trance-like state. Any action or pattern displayed in this dance is a special sign referring to a specific meaning or symbol. Therefore, this study aims to fill gaps in knowledge about symbolization and special meaning in trance dance. At the same time, it also seeks to expand the corpus of knowledge related to this phenomenon in a more specific and profound manner.

The question is, how do these sacred symbols provide communicative meaning as a form of healing? This leads us to seek an ideal concept that explains how symbols in the dances of Bajau Laut rituals serve as a sacred form of communication, aiding in the healing process. Therefore, this study aims to fill the knowledge gap by analyzing the specific symbols and meanings within these dances as a dimension of sacred communication. At the same time, it seeks to expand the body of knowledge related to this phenomenon in a more specific and in-depth manner.

METHODS

This study employed a qualitative ethnographic approach to investigate the Bajau Laut community in Semporna,

Sabah. This research is a follow-up of the researcher's previous studies on the functional and structural aspects of the sacred rituals of this community, which began in 2014. The study revisited the community multiple times to uncover diverse dimensions of their lives, particularly those related to rituals.

That begins with the respectful consideration of local elders and key participants in the ritual. This study has since gained their confidence in the dedication to cultural insight without eroding the secrecy and sacredness of the rituals. Further, this research will keep the norms and morals of the community intact, even aligning behavior with local culture until approval for the research itself is obtained.

Consequently, this article summarizes data collected from three patients who underwent the *Magombok* ritual. The three cases are presented in Table 1.

According to Table 1, the interview protocol was conducted with respondents carefully selected by the researchers based on their functions and roles in the ceremony. This selection was predicated on the criterion that the chosen individuals possessed rich and detailed information pertaining to the specific issue or phenomenon under investigation (Creswell & Creswell, 2023).

Table 1
Information on the implementation of Magombok rituals according to spiritual disease type

Patient	Spiritual Disease Type
Male	Enchantment
Female	Enchantment
Female	Ancestral Curse

The interviewees comprised the *kalamat*, patients, *Dayang-Dayang* (female assistants), *Si Otok* (male assistants) and musicians. Additionally, the study incorporated participant observation during the ritual ceremonies for all three patients. These observations were undertaken to glean insights and information regarding the *panangsang* dance movements during the trance state, with the resultant data being analyzed through a semiotic approach which examines the signified (the cultural and spiritual meanings or messages conveyed through the dance) and the signifier (the physical gestures and movements performed during the trance).

This approach was employed to help me systematically analyze every movement from the *panangsang* dance, allowing for a clearer interpretation of the signs and symbols embedded in the ritual. Connecting the observed gestures with their underlying meanings in each of the three cases could uncover the layers of symbolism specific to the spiritual and cultural context, thereby offering deeper insights into the role of the *panangsang* dance in healing practices.

This study adapts Barthes' semiotic theory, employing a sign system to analyze specific behaviors or actions that involve the interpretation of a particular society at a given time, thereby creating meaning (Rahman, 2009). Barthes classifies these signs into three categories, known as the 'order of signification', encompassing denotative, connotative, and mythical levels. Denotative signification reveals meanings that are visibly apparent or conveyed through an individual's bodily movements and actions. Conversely, connotative signification at the second level uncovers the implicit meanings contained within denotative signs. Myths, however, evolve within societal thought due to cultural influences, interpreting the correlation between what is visibly apparent and the implicit signs derived from it, ultimately leading to sacred experiences (Tejera, 2022), as illustrated in Figure 1, which elucidates Barthes' model of signification.

In elucidating visual signs and their associated meanings, diagrams and photographs play a crucial role. However, this research is bound by ethical

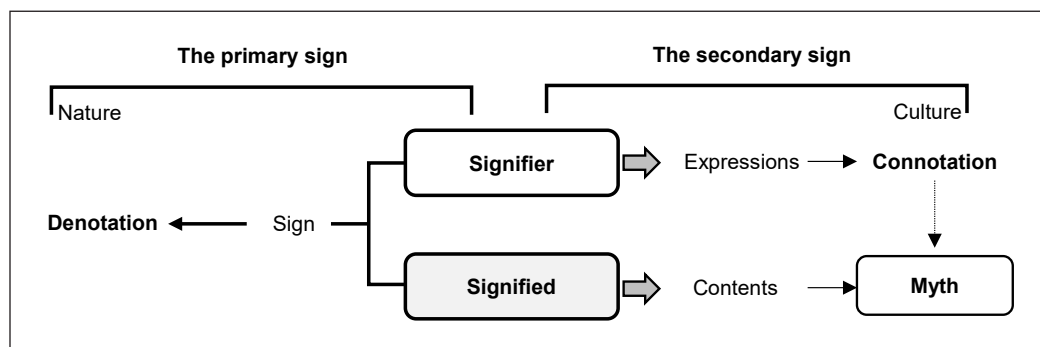


Figure 1. Adapted from the 'Order of Signification' model
 Source: Tejera (2022)

considerations that respect the discipline and taboos of conducting such studies. The research participants were strictly prohibited from making any video recordings, photographs, or image-related captures to prevent potential harm to the researchers and the subjects. Consequently, a mutual agreement was reached between both parties, stipulating that all documentation data would be represented through sketched images of body movements aligned with observational data. The analysis process was entirely adapted to the interview data and sign codes, according to the verbal facts expressed by the respondents. Accordingly, these sketched images were produced exclusively by the researchers and have been authorized for use by the study participants.

RESULTS AND DISCUSSION

The Structure of the *Panangsang* Dance

The term '*Panangsang*' in the Bajau Laut community signifies stimulation, arousal, or excitation. The philosophy of this society elucidates that the *panangsang* dance is sacred, serving as a conduit to unite the physical and spiritual realms. Literally, the *panangsang* describes the behavior of an individual in an altered state of consciousness, driven by traditional customs and spiritual practices. According to the *kalamat*, a person performing the *panangsang* experiences heightened mental and emotional states, supported by ritual elements such as incantations, music, meditation, and sacred dance movements.

Not all participants in the *magombok* ceremony are destined to perform the

panangsang dance, as it is reserved exclusively for those chosen by the spirits, particularly the *Kalamat*, patients, patients' families, *dayang-dayang*, and *si otok*. *Panangsang* is a crucial element within the structure of the *magombok* ritual ceremony, serving as a communicative medium to identify treatment prescriptions believed to be conveyed solely by ancestral spirits to the ceremony's participants. These treatment descriptions are manifested in two forms: through symbolic movements inherent in the *panangsang* or verbal utterances delivered in a semi-conscious state.

The *panangsang* dance is divided into three distinct phases: the conscious phase (exposition), the semi-conscious phase (trance), and culminating in the post-conscious phase (catharsis). This research has formulated a model of the *panangsang* dance performance structure, conceptualized as a descending process in the pursuit of achieving a trance state, culminating in residual echoes of consciousness that determine the description of meaning, cause, and treatment methods. This model, known as the *Panangsang* Cylinder Model, elucidates the concept of the descent between reality and the spirit world during the *panangsang* performance, as illustrated in Figure 2.

As depicted in Figure 2 (*Panangsang* Cylinder Model), the exposition section is where the ritualists enter a trance. Before such a transformation occurs, the ritual actors perform one of the dances: *igal tabawan*, *igal lellang* or *igal limbayan*. The *igal lellang* is specifically for men,

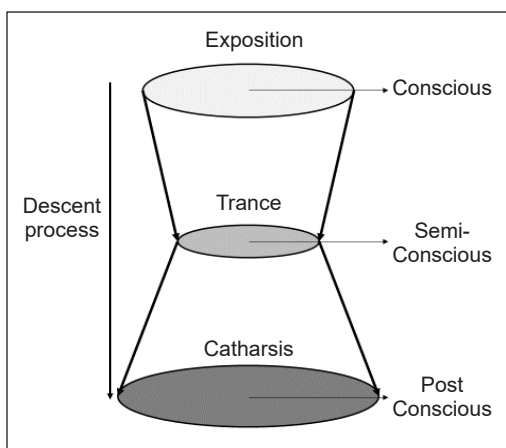


Figure 2. Panangsang cylinder model

and the *igal limbayan* for women (Nor & Hussin, 2006). But when dancers of both sexes move together, they give us the *igal tabawan* (Pisali et al., 2017). The value of a sex-separated dance style is that it serves to point out and enable the type of spirit that enters every dancer's body. Usually, the female parents' spirit dwells in the female performers' bodies, and vice versa.

Once the spirit takes over the dancer's body, no longer does the dance performed follow the formal rules as it once did. The dance is now improvisational, aggressive in its movements and floor-style freeform. Every movement is symbolically coded with different meanings that only the *kalamat* and *dayangs* can understand. The spirit also links the ritualists and the *kalamat* in a symbolic movement of the dance or other devices.

The catharsis period refers to the release of the spirit from the body of the actor, except the *kalamat*. It is a critical step as it concludes the spirit's direct control over the medium. This is the catharsis stage in which the ancestral spirits and the *kalamat* agree

on the best approach to heal the patient. Anything learned from the spirit during this possession process is critical for the patient's healing. These may be instructions, offerings, recipes or rituals the patient needs to follow to receive healing. The performer will then have to recover for about an hour or two to get back to their baseline. In the meantime, the *dayangs* will help the *kalamat* heal and be able to take part in the next ritual.

Analysis of Symbolic Movement Patterns in the *Panangsang* Dance

Barthes' expanded theory of symbols aids this research in comprehending how meaning is generated in the *panangsang* performance through emergent signs and symbols. Accordingly, the movements encompass various bodily gestures inspired by animal forms and behaviors. Seven animal movement patterns and behaviors were identified based on the frequency of their recurrence across all three patient cases. The animal movement patterns include the Eagle, Rooster, Stingray, Turtle, Spider, Cobra, and Python. These seven icons are deeply intertwined with sacred animal symbols in Bajau Laut's beliefs, derived from mythical narratives and beliefs in jinn and demons. Table 2 elucidates the matrix of animal movement patterns that emerged during the three healing processes.

Movement Pattern: Eagle

The first identified pattern is the eagle movement, which manifested in the ritual treatments of Patient 1 and Patient 3. This

Table 2
Matrix of emergent animal movement patterns for each patient

Patient Details	Days	Conditional Code Implementation	Movement Pattern										
			Eagle	Rooster	Stingray	Turtle	Spider	Cobra	Phyton				
Patient 1 Male/Enchantment	Day 1 (Monday) الاثنين	Morning	/	-	-	-	-	-	-	-	-	-	
		After Zuhur (noon prayer)	-	-	-	-	/	-	-	-	-	-	
		After Asar (afternoon prayer)	-	-	-	-	-	-	-	-	-	/	
	Day 2 (Tuesday) الثلاثاء	Morning	-	-	-	-	-	-	-	-	-	-	-
		After Zuhur (noon prayer)	-	-	-	-	-	-	-	-	-	-	-
		After Asar (afternoon prayer)	-	-	-	-	-	-	-	-	-	-	/
Day 3 (Wednesday) الأربعاء	Morning	/	-	-	-	-	-	/	-	-	-	-	
	After Zuhur (noon prayer)	-	/	-	-	-	-	-	-	-	-	-	
	After Asar (afternoon prayer)	/	-	-	-	-	-	-	-	-	-	-	
Patient 2 Male/Enchantment	Day 1 (Monday) الاثنين	Morning	-	-	/	-	-	-	-	-	-	-	
		After Zuhur (noon prayer)	-	-	-	-	-	-	-	-	-	-	-
		After Asar (afternoon prayer)	-	-	-	/	-	-	-	-	-	-	-
	Day 2 (Tuesday) الثلاثاء	Morning	-	-	-	-	-	-	-	-	-	-	-
		After Zuhur (noon prayer)	-	-	-	-	-	-	-	-	/	-	-
		After Asar (afternoon prayer)	-	-	-	-	-	-	-	-	-	/	-
Day 3 (Wednesday) الأربعاء	Morning	-	-	-	-	-	-	-	-	/	-	-	
	After Zuhur (noon prayer)	-	-	/	-	-	-	-	-	-	/	-	
	After Asar (afternoon prayer)	-	-	-	-	/	-	-	-	-	-	-	
Patient 3 Female/Ancestral curse	Day 1 (Monday) الاثنين	Morning	-	-	-	-	-	-	-	-	-	-	
		After Zuhur (noon prayer)	/	/	-	-	-	-	-	-	-	-	
		After Asar (afternoon prayer)	/	/	-	-	-	-	-	-	-	-	
	Day 2 (Tuesday) الثلاثاء	Morning	-	/	-	-	-	-	-	-	-	-	
		After Zuhur (noon prayer)	-	-	/	-	-	-	-	-	-	-	
		After Asar (afternoon prayer)	-	-	-	-	-	-	-	-	-	-	
Day 3 (Wednesday) الأربعاء	Morning	-	-	/	-	-	-	-	-	-	-		
	After Zuhur (noon prayer)	-	-	-	/	-	-	-	-	-	-		
	After Asar (afternoon prayer)	-	-	-	-	/	-	-	-	-	-		
Frequency			5	5	7	7	7	2	4	3			

movement pattern did not appear during Patient 2's ritual treatment session. The eagle movement pattern appeared three times during Patient 1's treatment: once on the first day during the implementation of conditional code in the morning (Conditional code refers to specific regulations and prerequisites that must be fulfilled before an individual or group can perform or participate in the ritual). The conditional code in rituals aims to ensure the authenticity, sanctity, and smooth execution of the ceremony, and twice on the third day: in the morning and after Asar. For Patient 3, it emerged twice, but only on the first day: after Zuhur and after Asar.

Figure 3 depicts the Eagle movement pattern. The denotative analysis of this movement can be identified when the physical posture begins with raised arms extended high to the sides above head level, with fingers splayed. The face is turned in either the left or right direction. The lower

body movement shows the performer on tiptoes, alternately balancing on the left and right big toes. Connotatively, this movement is interpreted as a symbolization of an eagle. The arms raised high to resemble an eagle's wings, while the face turned to either left or right signifies the eagle's keen eyes, symbolizing vigilance and alertness. The tiptoeing motion of the feet indicates the eagle's readiness and agility in pursuing its prey. Thus, the alternating balance on the right and left big toes supports the action of an eagle grasping its prey with its talons.

The synthesis of denotative and connotative meanings from the eagle movement pattern is marked by symbols of strength, freedom, and keen vision. This movement embodies a profound symbol of protection, spiritual guidance, and the intimate connection between humans and nature. This aligns with their belief that the eagle is an incarnation of their ancestral

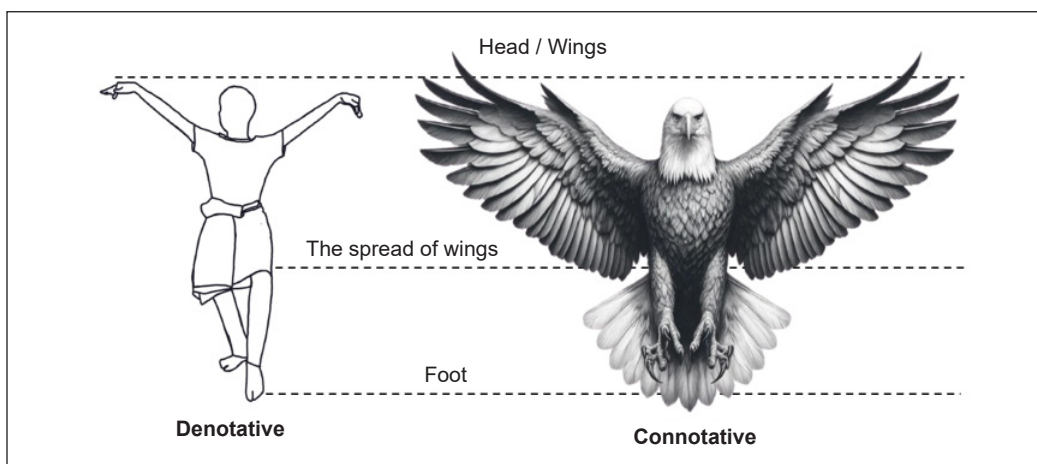


Figure 3. Eagle movement pattern

Note. The figure of the dancer is the author's work, created using Procreate, and the eagle image was generated using the ChatGPT image generator

spirit known as ‘*Ombok Maulana*’, an iconic male shaman figure who once served as protector and leader of this ethnic group in ancient times. This reflects an ideology emphasizing the importance of ancestral protection and guidance in community life. The movement reinforces narratives of courage and strength as highly esteemed values in Bajau Laut society.

Movement Pattern: Rooster

The second pattern is the rooster movement, which also appeared in Patient 1 and Patient 3’s ritual treatments.

The Rooster movement plan is illustrated in Figure 4. This movement did not emerge during Patient 2’s treatment sessions. The difference lies in its frequency: it appeared twice for Patient 1 on the third day after *Zuhur* and after *Asar*. For Patient 3, it occurred three times: twice on the first day, after *Zuhur* and after *Asar*, and once in the morning on the second day.

The denotative meaning of this movement describes the arms being spread downward at the sides. The body is slightly lowered with a small stance. The head is moved forward and backward while alternately raising and lowering the shoulders. Meanwhile, the feet are planted firmly and evenly without crossing between the left and right legs. To elucidate the connotative meaning, the body posture is believed to depict a rooster preparing to attack an opponent. A fighting rooster symbolizes a contest that could result in death for one of the combatants, indicating that even though it is not venomous or overtly threatening, it can still bring harm or serve as an ill omen for the patient.

In Bajau Laut’s belief, the rooster is often viewed as an incarnation of ‘*Ombok Kalamat*’, one of the revered ancestral spirit icons known for exceptional courage and vigilance. According to their mythology, they believe that *Ombok Kalamat* once

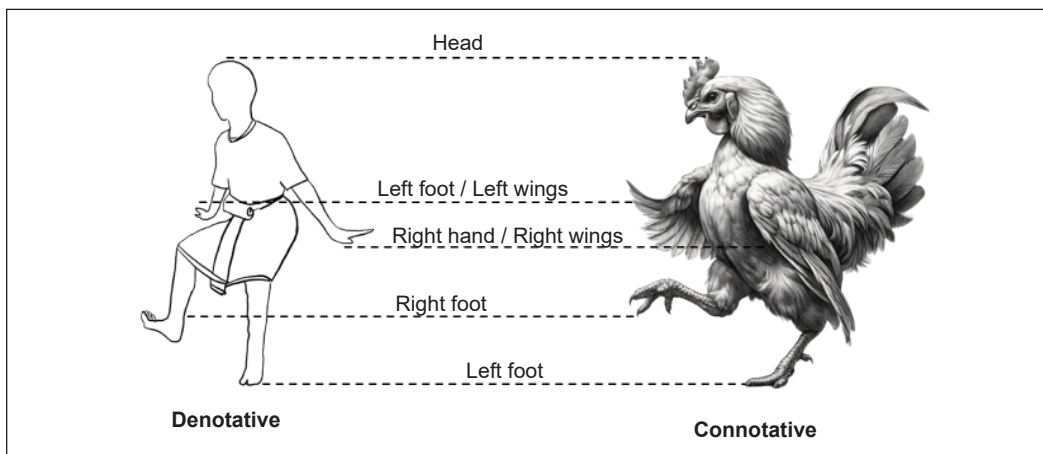


Figure 4. Rooster movement pattern

Note. The figure of the dancer is the author’s work, created using Procreate, and the rooster image was generated using ChatGPT image generator

possessed a rooster of extraordinary strength, which frequently emerged victorious in cockfighting festivals. It is believed that *Ombok Kalamat*'s inner strength merged with that of the rooster, leading to numerous triumphs. These contests were not merely between roosters but rather a reflection of how one's image and status of power were measured through their fighting rooster at that time.

Movement Pattern: Stingray

The third identified pattern is the movement of stingrays. This pattern emerged in the treatment sessions of Patients 2 and 3, but was absent in Patient 1's sessions. This movement appeared quite frequently, seven times. For Patient 2, it occurred on the first day in the morning after Zuhur and after Asar on the third day. Patient 3 exhibited this movement more often, with four occurrences after Zuhur on the second day and the third day for each conditional code set.

Denotatively, the arms are spread at shoulder level, with palms positioned vertically on both sides. The body stands erect with thighs close together. The heels are alternately planted between the left and right feet. Connotatively, this movement represents the stingray icon, where the alignment of the spread arms with the shoulders depicts its fins. The vertical posture illustrates the stingray's head and tail structure, while the alternating heel planting symbolizes the stingray's tail whipping motion.

The spiritual connection between the Bajau Laut community and marine life forms a robust cosmology within their cultural practices and customs. This is clearly shown in Figure 5 where Stingray movement pattern is displayed. In local belief, the stingray is considered an incarnation of an ancestral spirit known as '*Ombok Banag*.' This view is reinforced by a myth that narrates how stingrays helped rescue their ancestors from

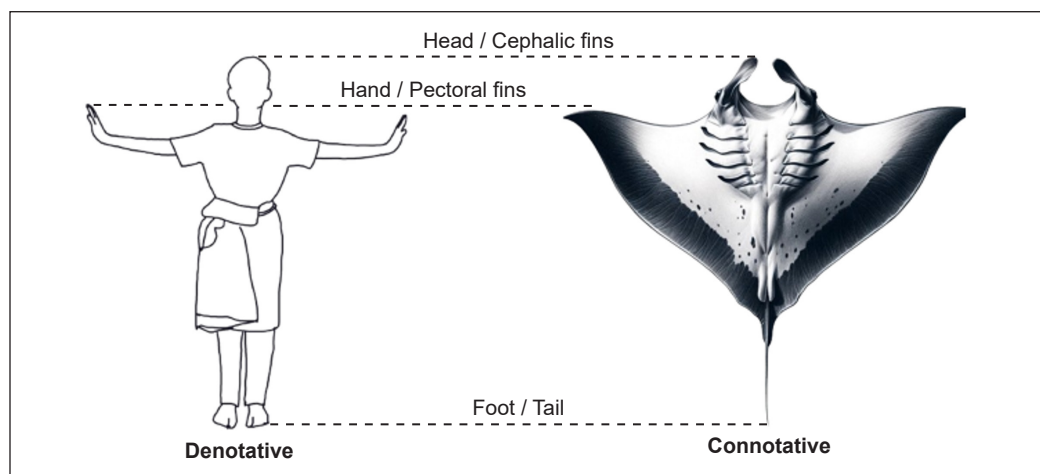


Figure 5. Stingray movement pattern

Note. The figure of the dancer is the author's work, created using Procreate. The Manta Ray image was generated using the ChatGPT image generator

drowning at sea and guided them to shore. Consequently, the ancestors vowed never to consume stingrays, regarding them as their lifesavers. This myth portrays the stingray as a guardian and savior that appears in critical moments to protect and assist its descendants.

Movement Pattern: Turtle

The fourth animal movement pattern that emerged is the turtle movement. This pattern, similar to the stingray movement, was observed in the treatment sessions of Patients 2 and 3. The difference lies in its frequency of occurrence: for Patient 2, it appeared four times over the three days, after Asar on the first day, in the morning on the second day, and after Zuhur and after Asar on the third day. For Patient 3, the turtle movement only emerged on the third day during the implementation of the conditional code.

A denotative analysis reveals a forward-bent body with an erect torso. The arms

are not spread, but rather tucked behind by joining the right and left hand fingers over the hipbone. The feet are planted evenly in multiples, producing no stomping sound. The connotative meaning of this movement portrays the turtle symbol, with the forward-bent body posture denoting a shelled turtle. The convergence of the left and right fingertips further illustrates the turtle's rounded shell. The evenly landed, soundless footfall symbolizes being under the sea, contrasting with the audible footfall referring to the land.

Another movement pattern is Turtle movement pattern as exhibited in Figure 6. According to local belief, the turtle's movement pattern signifies the presence of an ancestral spirit known as '*Ombok Millung*.' As the story goes, *Ombok Millung* journeyed to the sea to search for her husband, who had been missing for several weeks. When she did not find her husband, *Ombok Millung* beseeched the turtle's assistance to locate her husband, even if

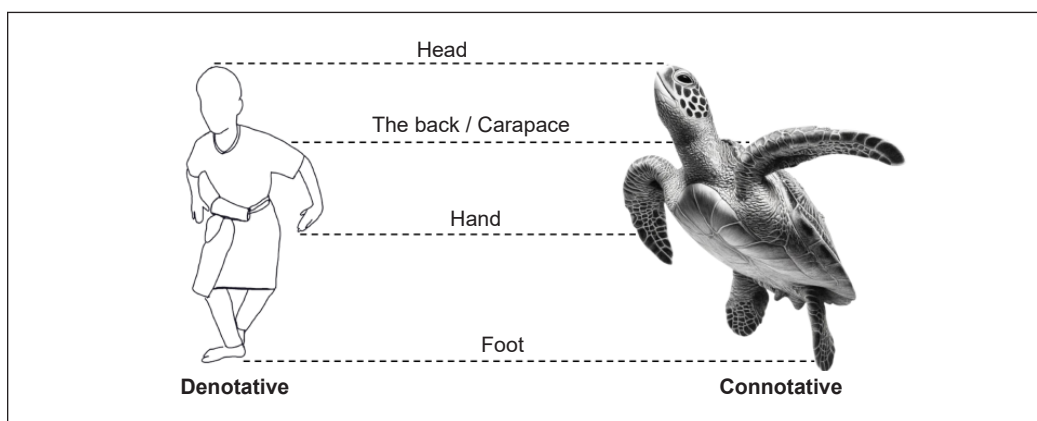


Figure 6. Turtle movement pattern

Note. The figure of the dancer is the author's work created using Procreate, and the turtle image was generated using the ChatGPT image generator

he was deceased. Then, from the sea floor, turtles arose and brought her husband's body. From that day forward, *Ombok Millung* decreed that her spirit would manifest as a turtle after her death to aid her descendants. The Ombok Millung myth underscores the importance of faithfulness, sacrifice, and protection, inherited through the symbolism of the turtle.

Movement Pattern: Spider

The next emerging movement pattern identified is the spider movement (shown in Figure 7), which only appeared twice in Patient 1's treatment sessions. The occurrences were first observed after Zuhur on the second day. They were then repeated on the morning of the third day. Notably, these events coincided with the movements of eagles and pythons, which were happening during the same period.

Denotatively, the performer is in a crouching position, signifying that one heel supports the buttocks. Another foot is placed forward to support the body's entirety. The

arms are extended at shoulder level, crossing at the forearms, with fingers pointing downwards and vibrating. The connotative meaning of this movement illustrates a crouched body, symbolizing spider-like movement that brings the body closer to the legs. The fingers at shoulder level, directed downwards, symbolize the numerous moving legs of a spider, transitioning from one place to another.

The Bajau Laut community's spiritual belief towards the spider does not carry connotations or narratives emerging from myth. Instead, the spider is associated with the story of the Prophet Muhammad (PBUH), where it is narrated that a spider assisted by weaving a web over the mouth of the Thawr cave—the hiding place of the Prophet Muhammad, whom the Quraysh pursued. Upon arriving at the cave mouth, the Quraysh saw a complete spider's web; thus, they concluded that no one was inside the cave and continued their search elsewhere, preserving Prophet Muhammad and Abu Bakar from the threat of the enemy.

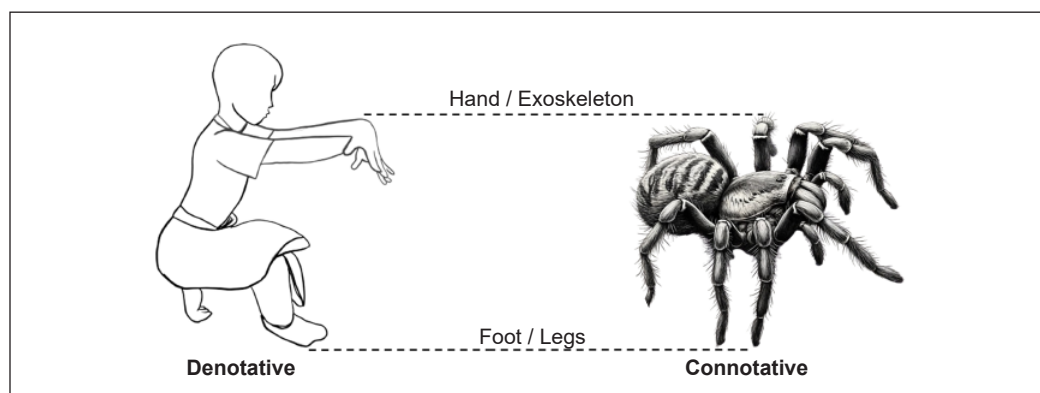


Figure 7. Spider movement pattern

Note. The figure of the dancer is the author's work created using Procreate, and the spider image was generated using the ChatGPT image generator

This narrative substantiates the belief that the spider's movement is a good omen, intended to offer protection from any harm.

Movement Pattern: Python

The subsequent pattern detected is the Python movement (Figure 8), which appeared in Patient 1's treatment sessions. This movement pattern emerged once on each treatment day, after Asar on the first and second day, and in the morning on the third day.

Denotatively, the body posture is upright, with both hands raised and curved above the head. This position only mobilizes the arms, and the body remains static in one position. If moving from one place to another, the legs are significantly extended with hands continuously directed upwards. The connotative meaning of this movement resembles a standing python, with its body curving into a circle. The stance of keeping an upright body posture with arms spread

above resonates with a python's large, majestic posture. Pythons are dangerous predators and are believed to bring harm to humans.

The symbolism embodied in the form of the python represents destructive power. The community explains that the python is a manifestation of evil spirits (demons and jinn), often regarded as entities that ruin lives and destroy everything around them. In one incident, a farmer killed a python that had eaten his livestock. It was later revealed that the python was a pet of a practitioner of black magic. As a consequence of this action, the black magic practitioner cast a curse, causing the farmer's pregnant wife to give birth to a child with skin resembling that of a python. Therefore, the python emerges as an entity that brings misfortune to the real world, emphasizing the importance of vigilance and spiritual protection in facing threats from the supernatural realm.

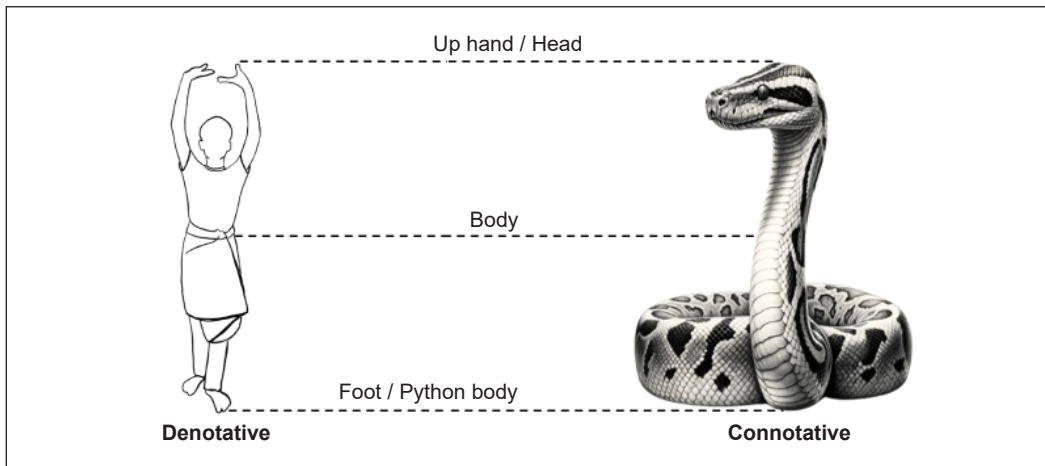


Figure 8. Python movement pattern

Note. The figure of the dancer is the author's work, created using Procreate, and the Python image was generated using the ChatGPT image generator

Movement Pattern: Cobra

The final movement pattern documented in all three treatment sessions was that of the cobra (illustrated in Figure 9). This distinctive motion was observed in Patient 2's treatment session, appearing consecutively beginning on the second day of treatment, first after Zuhur and then after Asar, followed by two occurrences on the third day: in the morning and after Zuhur.

A denotative analysis reveals curved hand movements extending to the upper and lower sides. The positioning of the hands is interchangeable, with either the left or right hand above and vice versa. The body posture remains upright with an arched torso. Piercing eyes scan the surroundings, while the head is aligned with the upraised hand. The legs are slightly bent and poised on tiptoes, crossed in opposition to the upward-extended hand. The connotative interpretation of this movement symbolizes a cobra poised to strike its adversary, with

the erect torso signifying the potency of its venom. The piercing gaze is often associated with a state of threat, indicative of self-defense and intimidation of potential prey. The raised position of one foot on tiptoes represents the snake's supportive body posture, while the implied tail-lashing motion suggests the viper's readiness to deploy its venom.

This movement's symbolism elucidates a perilous threat capable of affecting an individual's physical and spiritual aspects. The cobra represents a malevolent spiritual force that shamans employ to inflict sorcery upon others. This motion indicates that the patient has been bewitched, marking the start of negotiations between ancestral spirits and malevolent entities for the purpose of healing. This ideology stems from the narrative of ritual practitioners, recounting an ancestral tale wherein one of their forebears was bitten by a cobra. Subsequently, *kalamat* engaged in a face-to-face dialogue with

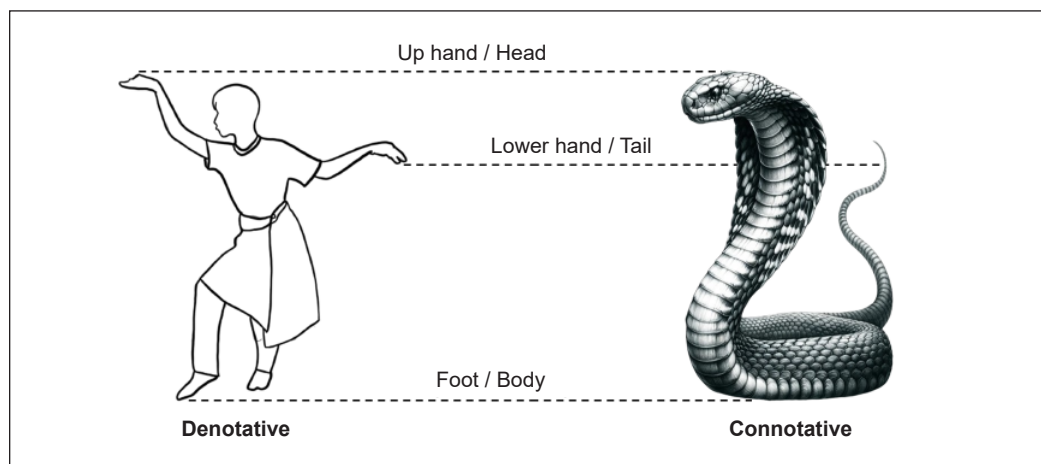


Figure 9. Cobra movement pattern

Note. The figure of the dancer is the author's work, created using Procreate, and the Cobra image was generated using the ChatGPT image generator

the serpent, persuading it to withdraw its venom and pledging that neither he nor his descendants would harm or kill the cobra henceforth. Consequently, this movement reinforces the mythological significance and cultural beliefs surrounding the cobra as a potent symbol of spiritual threat.

Correlation Between Movement Patterns and Semantic Analysis Across Treatment Sessions

In the case of Patient 1, four movement patterns were noted: (1) the eagle (twice), (2) the rooster (twice), (3) the spider (two), and (4) the snake (three). The healer regards the python not as a weapon but as an expression of evil magic by a mainland shaman. This enchantment is intended to disrupt the mundane and instill dread, suggesting that the person is under a magical attack and requires spiritual defenses. These defenses involve summoning deities such as the eagle, rooster, and spider. Their dances symbolize an act of revenge against the python, an invasive predator.

The third day, the eagle's motion coincided with that of the spider and the python, revealing a conflict between the ancestral guardians and the python's djinn. The rooster, too, showed up with the eagle in the afternoon session, marking an important step in the treatment. By contrast, Patient 2 had three movements: (1) the stingray (three times), (2) the turtle (four times), and (3) the cobra (four times). The cobra symbolizes dark witchcraft, particularly on women, which resonates with the Bajau Laut cosmology of deadly magical forces.

Stingray and turtle migrations represent formidable ancestral spirits associated with the ocean: stingray (*Ombok Banag*) and turtle (*Ombok Milung*), both guarding the Bajau Laut genealogies.

Patient 3, suffering from a curse or *Tulah*, exhibited just four motifs: (1) the eagle (two times), (2) the rooster (three times), (3) the stingray (four times), and (4) the turtle (three times). This absence of serpentine movement is evidence of resentment towards their ancestors for things that harm their tradition. These patterns are part of the Bajau Laut ancestral pantheon, encompassing nautical and bird imagery. The dominance of the stingray marks the significant presence of *Ombok Banag*, ancestral participation in the settlement of *Tulah*. The gestures overall reflect the presence of the ghosts of ancestors as well as the evil spirits of magic, creating an alternate history over the course of the therapies.

Panangsang dance is a critical vehicle for spiritual care, linking the physical and metaphysical spheres for the community. It represents beauty and holds a key spiritual message. Every animal-related movement signifies a therapy first, followed by signs that connect to the therapeutic procedure, echoing the dual significance of animals as signs. These symbols and signs convey meaning in words and through gestures, facial expressions, time, space, and other non-verbal components. This lack of spoken expression is vital to the Bajau Laut faith and forms a history of myths, convictions and practitioners' lived experiences that inform their social philosophy.

CONCLUSION

In its entirety, it can be deduced that the symbolic movements in the *panangsang* dance serve as a profoundly significant medium of communication for treating spiritual ailments. This dance effectively bridges the communication gap between the physical and metaphysical realms, offering a readily comprehensible interpretation to the community. It stands as a testament to artistic expression while conveying spiritual messages integral to the healing process. Each animal-inspired movement is an initial indicator of the treatment description, followed by specific signs that form an analogous concept of the required therapeutic method. This reverts to the fundamental symbolism of venomous animals as harbingers of ill omens and, conversely, as bearers of positive portents.

As intermediaries within the realm of social phenomena, these signs and symbols are not merely expressed through spoken language or linguistic verbal symbols, but also through actions, facial expressions, time, space, and other non-verbal means. The influence of non-verbal signs, as elucidated in each movement pattern, holds immense significance in the belief system of the Bajau Laut community. Consequently, this form of communication reflects a symbolic interpretation that weaves together a narrative tapestry of myths, beliefs, and practitioners' experiences to construct the social philosophy of their society.

Theoretical and Practical Implications

This study significantly advances the Sacred Communication Theory, proposed by Eliade (1957/1987), by expanding its scope beyond linguistic and textual traditions to incorporate totemic symbolism and gestural communication as mechanisms of transcendental interaction. While prior research has largely emphasized verbal rituals (Turner, 1969), sacred texts (Carey, 2009), and prayers as primary modes of divine communication (Turkle, 2022), it overlooks the role of non-verbal signifiers, particularly totemism and bodily expressions, as mechanisms of spiritual engagement. Thus, this study demonstrates that sacred meaning is also transmitted through non-verbal signifiers such as totemic representations and ritualistic movements.

Moreover, the introduction of a dualistic framework—distinguishing between benevolent (non-venomous) and malevolent (venomous) totems—provides a new analytical lens for understanding sacred equilibrium in ritual communication, as discussed by Turner (1969) and Turkle (2022). This challenges existing assumptions that sacred symbols function solely as unidirectional conduits of spiritual meaning, highlighting instead their dynamic interplay in the construction of religious experience (Womack, 2005).

By bridging semiotic analysis (Barthes, 1988) with ritual theory (Turner, 1969), this research establishes a broader theoretical foundation for examining sacred

communication across diverse cultural contexts, incorporating totemic and gestural semiotics as active communicative forces within ritual structures (Tejera, 2022). The findings provide a theoretical foundation for understanding non-linguistic sacred interactions in indigenous and mainstream religious traditions, further refining the intersections between materiality, embodiment, and spirituality

Practically, this study offers crucial implications for the preservation of traditional ritual practices of the Bajau Laut community, particularly in the realm of performing arts and the maintenance of cultural identity. The discovery of the role of gestural communication as a conduit for sacred interaction can be applied in the creation of a new traditional dance form, inspired by the movement representative of totemism. The movement patterns highlighted in this study act as symbolic representations and possess the potential to be artistically translated into traditional choreography that retains the original aesthetic values without compromising religious and cultural sensitivities. This approach could serve as an effective strategy for preserving intangible cultural heritage, where ritual elements are re-adapted as performance art forms that honor the beliefs of diverse communities.

Limitations and Recommendations for Future Research

This study primarily focused on the *magombok* ritual practiced by the Bajau Laut in the Semporna district of Sabah.

The research specifically examined the *panangsang* dance to explore sacred movement symbols that serve as a medium of communication between the metaphysical and physical realms. However, the study's limitations were confined to three treatment sessions, potentially restricting the ability to collect more extensive and in-depth data on ritual practices across the broader Bajau Laut community.

Consequently, future research is recommended to expand the scope of the study by involving multiple Bajau Laut groups from diverse locations to obtain a more comprehensive perspective on sacred symbolism in their rituals. Further investigations could also examine how these sacred elements evolve within changing societal contexts and how the community adapts. In a broader spectrum, cross-cultural studies on sacred practices from various other ethnic groups could provide robust perspectives on the theory of the sacred in human culture. In this regard, a more diverse methodological approach incorporating different theoretical and practical perspectives could be applied to gain a more profound corpus of knowledge about sacred symbolism in the context of human customs and belief systems.

ACKNOWLEDGEMENT

The research presented in this paper was made possible with financial support from the Fundamental Research Grant Scheme (FRGS) 2022-0060-107-02, awarded by the Malaysian Ministry of Higher Education. Special acknowledgement goes to Universiti

Pendidikan Sultan Idris and to the elders and practitioners of the *Magombok* rituals, whose cooperation and knowledge were instrumental in the success of this research.

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Review Article

Spirituality and Religious Practices as Resilience of Urban Poor Families: A Systematic Literature Review

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ABSTRACT

Studies on urban poor families often focus on physical, economic, financial, and educational aspects with a lesser emphasis on spiritual and religious growth. Nonetheless, the spiritual and religious growth of the family is fundamental to the family's resilience. Previous studies have demonstrated that incorporating spiritual and religious aspects into the support framework for urban poor families can enhance their overall resilience and well-being. Neglecting spiritual and religious aspects presents an incomplete picture of urban poor family support and development. Hence, this review aims to examine the relationship between spirituality and religious practices, and urban poor family resilience by employing a systematic literature review approach. The PRISMA method is used to provide a structured framework for the review. Following an analysis of 31 articles, six distinct themes were identified: spirituality as a source of inner strength, the strength of social relationships, the meaning of life and hope, religious practice and spiritual strengthening, religious education in the family, and religion and coping skills. This review contributes to current knowledge by understanding the significant relationships that exist between spiritual and religious aspects and resilience. It also offers recommendations for future research directions and informs the authorities, communities, and family organizations in improving aid programs by focusing on spiritual development and the well-being of urban poor families.

Keywords: Religious practices, resilience, spirituality, urban poor families

ARTICLE INFO

Article history:

Received: 08 September 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.15>

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INTRODUCTION

The quality of familial life depends greatly on several family dynamics and the surrounding environment. These elements include family relationships, effective communication, family members' commitment to their roles and responsibilities, as well as values which

encompass norms, customs, traditions, and established family rules.

For families that value religion as a way of life, it serves as a foundation for achieving prosperity and happiness. Religion significantly influences the development of the family ecosystem because religious and spiritual values imbue family life with meaning. Religiosity refers to the formal, community-oriented expression of faith, often linked to adherence to organized religious doctrines and practices, such as rituals, worship, and teachings (Arrey et al., 2016; Koenig et al., 2001). It involves interpersonal and institutional engagement, reflecting structured, society-based beliefs and practices related to a higher power, often guided by religious institutions or cultural norms (King & Crowter, 2004; Peterman et al., 2002). In Islam, it includes dimensions such as belief in Allah, the Five Pillars, religious experience, and adherence to Islamic principles in daily life (El-Menouar, 2014). These values encompass reliance on God, the cultivation of a balanced lifestyle, nurturing interpersonal relationships, and effective problem-solving skills. In essence, religion closely intertwines with aspects of familial well-being and mental health.

However, spirituality is not necessarily related to the concept of the divine (Asih et al., 2020). Spirituality emphasizes individual experiences and personal quests for meaning, purpose, and transcendence beyond material concerns, which may or may not connect to organized religion (Brinkerhoff & Jacob, 1987; Hill et al., 2000). It includes practices like meditation or prayer and fosters a relationship with the sacred, focusing on

interconnectedness with a transcendent being (Chaves & Gil, 2015; Dein, 2005). In the Islamic perspective, spirituality is deeply tied to the concept of ruh (spirit) and vicegerency (khalifah), fostering a connection between humans, God, and the universe (Abdullah, 2022). Spiritual aspects can be associated with the elements of human experience that relate to the non-physical or metaphysical dimensions of life. These aspects are often deeply personal and can vary between individuals and cultures. Different individuals, cultures and beliefs describe varying natures of spiritual dimensions, such as exploring oneself, being mindful, finding inner peace and showing compassion (Mata-McMahon et al., 2020).

In families experiencing poverty, the risk of stressful episodes is elevated because family stability is largely dependent on the availability of financial resources. Families experiencing financial struggles are prone to displaying signs of distress, such as physical and mental health issues, children dropping out of school, social challenges, and difficulties in planning for the future (Jamil & Che Mat, 2014; Mohd Zin et al., 2019).

In the context of urban poor families residing in large cities, life is more complex than in conventional poverty situations. Khalid (2016) noted that families living in urban areas often face challenges such as inadequate access to housing, physical infrastructure, essential services, economic resources, healthcare, social safety nets, and opportunities for family development. In addition, the rapid pace of urban development, rising population

density and increased competition for job opportunities have contributed to making life more challenging for the urban poor, even in relatively prosperous and developed cities (Asian Development Bank, 2014; Ministry of Economic Affairs, 2019). Due to the high cost of living, individuals experiencing urban poverty often struggle to meet their primary needs, such as a balanced and nutritious diet, appropriate clothing, a proper place to live, and other basic non-food needs like quality education (Dora & Halim, 2011; Rosida, 2018). These issues must be efficiently addressed to ensure that the social structure or ecosystem among urban poor families is not weakened.

A weak family ecosystem can have a negative implication on the psychological health of its members. Emotions that are disturbed by urban poverty can lead to feelings of restlessness, fear, and anger towards one's situation. This may also affect self-stability, resulting in a lack of self-confidence, poor problem-solving ability, and a lack of tolerance for disappointment (Banovcinova et al., 2014; Dora, 2000). The factors directly relate to the concept of family resilience when faced with life's problems. Family resilience refers to the ability of poor families to rise above hardships and the pressures of poverty. This is because the psychological impacts caused by poverty on poor families require strong resilience to address effectively (Arshat et al., 2018). It plays a vital role in ensuring that a family can maintain stability and enjoy family harmony and happiness. According to Richardson (2002), resilience in the face of poverty brings feelings of hope

and control over life, as it empowers family dynamics. Through resilience, a family gains the foundation to act, which in turn strengthens each member's self-efficacy.

Resilient families are typically able to adapt to risky situations and life's stressful challenges (Subra et al., 2019). Conversely, members of families with low resilience are often seen to be scattered or disorganized, and less able to overcome the intriguing factors facing themselves and their families. Therefore, each aspect of family development is vital to ensure that family members have the resources to build and strengthen their family's resilience. The ability to remain steadfast when dealing with poverty and to adapt to difficult circumstances is a key factor in maintaining and improving aspects of familial well-being.

With that being said, this article will focus on spiritual and religious aspects, which are one of the most important criteria of family development, in the context of improving the resilience of urban poor families.

PRIOR STUDIES

As stated earlier, poverty negatively impacts the family system, particularly the relationship among its members. A study by Yusof et al. (2020) found that poverty and hardship are the primary contributors to conflict between spouses and often lead to domestic abuse. In addition to affecting parents, poverty also impacts their children's well-being. It is reported that children living in poverty suffer from increased deficits

in memory, language use, learning, and cognitive abilities (Jakovljevic et al., 2016).

The crisis of poverty disrupts not only the quality of life of a single family but also the well-being of a society as a whole. Social problems such as drug abuse, domestic violence, pregnancy out of wedlock, baby abandonment, family disputes, excessive jealousy among spouses, and infidelity are reported more frequently among vulnerable families living in poverty (Manshor et al., 2020). These issues underscore the multifaceted impact of poverty on family dynamics and societal health. Therefore, it is vital for poor families to ensure that their sustainability and dynamics can be maintained even under severe pressure or crises (Foy et al., 2011). Adapting to stressful circumstances must occur quickly in order to minimize adverse consequences for the family.

Despite the challenges of high living costs, urban poor families are generally able to survive, due to the adequate support from both government and non-governmental organizations. This support plays a crucial role in helping these families navigate and endure difficult circumstances. The allocation of cash aid, housing programs, educational and entrepreneurial training, as well as healthcare services, is a critical form of such support (Chamhuri & Ismail, 2019). However, according to Chamhuri and Ismail (2019), this support may not always be fully effective, since it sometimes leads to a lack of self-reliance among poor families due to an over-dependence on the aid.

Initiatives for strengthening the resilience of urban poor families should not focus solely

on physical needs but should also prioritize spiritual factors and elements of religious behavior. Spiritual and religious elements could be one of the keys in encouraging poor families to face their poverty. For example, religious behavior has an effect on mental health, which leads to positive attitudes and lifestyles among individuals (Wahid et al., 2011). Additionally, the increased score of the Indeks Kesejahteraan Keluarga from 2016 to 2019 is attributed to spiritual and religious behavior (National Population and Family Development Board, 2019). The findings indicate that the measured indicators of spiritual and religious behavior, such as religious beliefs and convictions, religious actions and practices, including worship, rituals, and morality, are pivotal in enhancing the well-being of families in Malaysia.

In a wider context, studies have shown that spirituality and resilience have a dynamic relationship in other regions and cultures. (Gava, 2013; Kumar et al., 2023; Mtapuri & Mazengwa, 2013; Singh, 2015; Wodon, 2018). However, the impact of spirituality on resilience varied depending on cultural and religious contexts. In certain cultures, communal religious practices and strong social integration within religious communities provide significant support, enhance resilience and facilitate growth and healing. In other instances, personal spiritual practices, including meditation and spiritual personal reflections, played a significant role. These studies indicated that spiritual beliefs and practices, either internal or external, appeared to be present throughout humans' lives.

Thus, this article is written to seek a better understanding of the importance of spirituality and religious practices in ensuring the sustainability of urban poor families by exploring the literature associated with this matter. The questions addressed in the article are as follows:

- (1) What is the relationship between spiritual aspects and the resilience of urban poor families?
- (2) What is the relationship between religious practice and the spirituality of urban poor families?

METHODS

This is a qualitative study employing the Systematic Literature Review (SLR) approach. This approach is used to identify, evaluate, and interpret the findings related to the topic in an in-depth and structured manner. The texts sampled for this article relate to empirical studies that include discussions and critical debates on spirituality, religion, spiritual values, and religious practices, as well as the relationships between these aspects and the concept of resilience among urban poor families. This SLR approach is beneficial as it provides a detailed picture of a situation, issue or phenomenon, enabling a comprehensive and structured analysis of existing research by synthesizing findings from multiple studies. Unlike the conventional literature review approach, the SLR approach focuses on specific texts to address predetermined research questions, offering a more structured and comprehensive analysis. When reporting the literature review, the Transparent Reporting

of Systematic Reviews and Meta-Analyses (PRISMA) method is used to provide a structured framework for the review (Moher et al., 2015; Salleh et al., 2023; Shaffril et al., 2018). It includes a flow diagram to visually present the study selection process and guides the reporting procedure of the review. This method allowed a thorough search for terms related to spirituality, religion, and religious practices, and mapped out existing empirical studies on urban poor families' resilience.

Systematic Literature Analysis Procedure

The study employed a three-step process for SLR, consisting of identification, screening, and eligibility (Shaffril et al., 2018). The first step, identification, involves searching for articles that discuss spiritual and religious aspects, religious practice, and their relationship with the concept of resilience among urban poor families. This procedure utilized multiple and varied keywords to search for pertinent articles.

There are five main keywords with subcategories. Each text sample is carefully selected in accordance with the research questions. Journal texts are extracted from authoritative databases such as Web of Science, Scopus, APA PsycNet, PubMed, Educational Resources Information Center (ERIC), Google Scholar, Semantic Scholar, and other peer-reviewed journals that emphasize the research topic.

The databases selected for this study were chosen for their reputation and recognized credibility in the academic community. Scopus and Web of Science are renowned

for their rigorous indexing processes and high-quality standards (Pranckutė, 2021), offering extensive coverage of journals across various fields, including sociology, religion and psychology. APA PsycNet and PubMed, which focus on psychology and mental health (Falzon et al., 2010), are relevant for exploring resilience and coping skills among urban poor families. ERIC contributed educational articles, while Google Scholar and Semantic Scholar were

used as supplementary tools to identify additional relevant studies not indexed in the other databases. Table 1 delineates the keywords of the searched method.

The second phase is the screening process, which focuses on relevant criteria before accepting or discarding selected articles. The selection of criteria, including the publication period from 2010 to 2024, aims to prioritize contemporary discussions that are pertinent to the evolving

Table 1
The search strings

Database	Search String
Web of Science	TS= ((spiritual*) AND (religio*) AND (resilien* OR endurance OR perseverance) AND (poverty OR poor) AND (family))
Scopus	TITLE-ABS-KEY ((“spiritual”* “resilien”* “urban poor family”*) AND (“religio”* OR “religious practices” OR “religious beliefs” OR “religious affiliation”) AND (“resilien”* OR “coping, endurance” OR “perseverance” OR “coping strategies” OR “coping skills”) AND (“poverty” OR “urban poor” OR “extreme poverty” OR “ <i>asnaf</i> ” OR “ <i>fakir</i> ” OR “ <i>daiif</i> ”) AND (“intervention” OR “spiritual therapy” OR “spiritual recovery” OR “religious therapy”))
APA PsycNet	Any Field: spiritual AND Any Field: religion OR Any Field: religious AND Any Field: belief AND Any Field: resilience AND Any Field: urban AND Any Field: poverty
Pubmed	((“spiritual”[All Fields] OR “spirituality”[MeSH Terms] OR “spirituals”[All Fields]) AND (“religion”[MeSH Terms] OR “religion”[All Fields] OR “religion s”[All Fields]) AND (“resilience, psychological”[MeSH Terms] OR “psychological resilience”[All Fields] OR “resilients”[All Fields]) AND (“poverty”[MeSH Terms] OR “poverty”[All Fields]) AND (“intervention s”[All Fields] OR “methods”[MeSH Terms] OR “interventional”[All Fields]))
Educational Resources Information Center (ERIC)	“Spirituality and Religious Practices” Spirituality and religion poor families Spirituality, religion, resilience poor families Spirituality, religion, resilience, coping skill urban poor families
Google Scholar	“Spiritual” AND “religious” AND “resilience” OR “endurance” AND "family" AND "poor" AND “coping strategies” OR “coping skills” AND “poverty” OR “poor” OR “urban poor” OR “extreme poverty” OR “ <i>asnaf</i> ” OR “ <i>fakir</i> ” OR “ <i>daiif</i> ” OR “pressures of poverty” AND “intervention” OR “spiritual therapy” OR “spiritual recovery” OR “psychosocial” OR “religious therapy” OR “psychological therapy
Semantic Scholar	“Spiritual” AND “religious behaviour” OR “religion” AND “resilience” OR “endurance” AND "family" AND "poor" AND “coping strategies” OR “coping skills” AND “poverty” OR “poor” OR “urban poor” OR “extreme poverty” AND “intervention” OR “spiritual therapy” OR “spiritual recovery” OR “psychosocial” OR “religious therapy” OR “psychological therapy

dynamics of urban poverty and family resilience. The inclusion of English and Malay as the languages of analysis aligns with the local context and researchers’ linguistic proficiency, thereby ensuring effective comprehension and interpretation. Furthermore, the focus on original research guarantees that the data utilized is primary and directly addresses the phenomenon under investigation. Meanwhile, the chosen fields of study, such as religion, social sciences, humanities, and psychology,

offer multidisciplinary insights essential for exploring the intricate relationship between spirituality, resilience, and urban poverty. In this process, a total of 389 out of 499 texts were analyzed using the above approach. The accepted articles met a set of criteria, as shown in Table 2.

In selecting the articles from relevant literature, the eligibility phase was conducted manually. Figure 1 shows a flow diagram of the article selection process as adapted by Shaffril et al. (2019). This phase is used to

Table 2
The inclusion and exclusion criteria

Criteria	Inclusion	Exclusion
Year of Publication	2010–2024	Before 2010
Type of Research	Original research: PhD thesis, journal article, conference proceedings.	Other than original research.
Language	English or Malay	Other than English or Malay
Field of Study	Religion, social science, the humanities, psychology.	Other than religion, social science, the humanities, psychology.

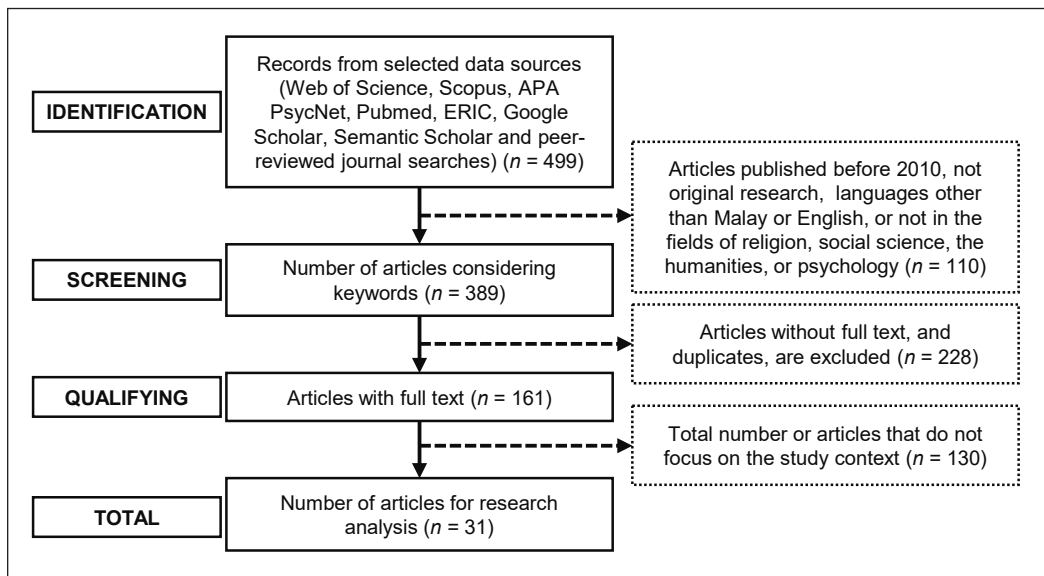


Figure 1. Article selection process flowchart
Source: Shaffril et al. (2019)

identify any repeated articles or those that did not fit the research theme or selection criteria. The study found that only 31 articles were relevant for SLR analysis. The texts are analyzed using descriptive synthesis which involves describing the contents of the text in a narrative fashion. This analysis approach allows the findings to be discussed in relation to the research questions.

Quality Appraisal

The quality appraisal was conducted using the Mixed-Methods Appraisal Tool (MMAT) developed by Hong et al. (2018) to ensure the methodological rigor and analysis of the selected studies were completed satisfactorily. In this study, the quality appraisal focused on two types of research, namely qualitative research and quantitative descriptive research as shown in Table 3.

For qualitative studies, the MMAT emphasized key criteria, including the alignment of research questions with the

provision of sufficient data, the adequacy of qualitative data collection to address the research questions, and the coherence between data sources, data collection methods, analysis, and interpretation. These criteria were applied to ensure the inclusion of studies with a robust methodological framework and thorough analysis.

In evaluating quantitative descriptive studies, the MMAT applied criteria such as the suitability of the sampling strategy to the research questions, the sample’s representativeness to the target population, the appropriateness of measurement tools, and the adequacy of the analytical techniques. Each article was assessed based on five criteria, with responses categorized as “yes,” “no,” or “can’t tell.” Articles were included in the review when they passed at least three of the five criteria. Based on this assessment, 24 articles met all five criteria, four articles fulfilled four, and three articles satisfied three criteria as shown in Table 4.

Table 3
The criteria used to determine the rigor of the methodology and analysis used in the selected articles

Research Design	Assessment Criteria
Qualitative	QA1: Is the qualitative approach appropriate to answer the research question?
	QA2: Are the qualitative data collection methods adequate to address the research question?
	QA3: Are the findings adequately derived from the data?
	QA4: Is the interpretation of results sufficiently substantiated by data?
	QA5: Is there coherence between qualitative data sources, collection, analysis and interpretation?
Quantitative	QA1: Is the sampling strategy relevant to address the research question?
	QA2: Is the sample representative of the target population?
	QA3: Are the measurements appropriate?
	QA4: Is the risk of nonresponse bias low?
	QA5: Is the statistical analysis appropriate to answer the research question?

Source: Hong et al. (2018)

Table 4
Results of the quality assessment

Study	Research Design	QA1	QA2	QA3	QA4	QA5	Number of criteria fulfilled	Inclusion in the review
Mahoney (2010)	QL	√	√	X	√	√	4/5	√
N. A. A. Aziz (2011)	QL	√	√	X	√	√	4/5	√
Laher & Khan (2011)	QL	√	√	√	√	√	5/5	√
Yalawae et al. (2011)	QL	√	X	√	√	√	4/5	√
Wahid et al. (2011)	QL	√	√	√	√	√	5/5	√
Rahman (2012)	QL	√	X	X	√	√	3/5	√
Mohd Nor (2013)	QL	√	X	X	√	√	3/5	√
Jodi et al. (2014)	QN	√	√	√	√	√	5/5	√
Doolittle et al. (2015)	QN	√	√	√	√	√	5/5	√
Hamren et al. (2015)	QN	√	√	√	√	√	5/5	√
Puteh & Mamat (2015)	QN	√	√	√	√	√	5/5	√
Munawiroh (2016)	QL	√	√	X	X	√	3/5	√
Mustaffa et al. (2017)	QL	√	√	√	√	√	5/5	√
Hussin et al. (2017)	QN	√	√	√	√	√	5/5	√
St. Vil et al. (2017)	QL	√	√	√	X	√	4/5	√
Borgia et al. (2018)	QN	√	√	√	√	√	5/5	√
Finka & Prasetya (2018)	QN	√	√	√	√	√	5/5	√
Leng et al. (2018)	QL	√	√	√	√	√	5/5	√
Ahmad & Mohd Noor (2018)	QL	√	√	√	√	√	5/5	√
Wahidah (2018)	QL	√	√	√	√	√	5/5	√
Zaim & Salleh (2019)	QL	√	√	√	√	√	5/5	√
Musa & Sa'ari (2019)	QL	√	√	√	√	√	5/5	√
Khan & Tantray (2019)	QL	√	√	√	√	√	5/5	√
Villani et al. (2019)	QN	√	√	√	√	√	5/5	√
A. R. A. Aziz et al. (2020)	QL	√	√	√	√	√	5/5	√
Hamilton et al. (2020)	QL	√	√	√	√	√	5/5	√
Sahid et al. (2020)	QL	√	√	√	√	√	5/5	√
Suhaimi et al. (2021)	QL	√	√	√	√	√	5/5	√
El-Khani et al. (2023)	QL	√	√	√	√	√	5/5	√
Meitasari et al. (2023)	QN	√	√	√	√	√	5/5	√
Peleg & Peleg (2024)	QN	√	√	√	√	√	5/5	√

Note. QA= Quality assessment; QN= Quantitative; QL= Qualitative

Data Extraction and Analysis

The articles in the review were thematically analyzed to synthesize data from diverse research designs, using Flemming et al. (2019) thematic synthesis approach due

to its flexibility. The process followed the steps outlined by Kiger and Varpio (2020). First, researchers familiarized themselves with the data through repeated readings to understand the dataset. This

approach provided them with a thorough understanding of the raw data, forming the groundwork for subsequent stages.

In the second step, the researchers generated initial codes. At this stage, they systematically organized the data into detailed and specific components. They carefully reviewed all selected articles to extract any information relevant to the primary research question. The third step focused on generating themes. Using an inductive coding framework, the researchers identified patterns, similarities, and relationships within the extracted data. Themes were developed directly from the coded data, ensuring alignment with the original dataset and accurately reflecting its content. This process resulted in the identification of nine main themes. The next stage involved evaluating and refining the developed themes to ensure their relevance and coherence.

FINDINGS

Out of the 31 articles which were analyzed, 16 research project were carried out in Malaysia (Ahmad & Mohd Noor, 2018; A. R. A. Aziz et al., 2020; N. A. A. Aziz,

2011; Hussin et al., 2017; Jodi et al., 2014; Leng et al., 2018; Mohd Nor, 2013; Musa & Sa'ari, 2019; Mustaffa et al., 2017; Puteh & Mamat, 2015; Rahman, 2012; Sahid et al., 2020; Suhaimi et al. 2021; Wahid et al., 2011; Yalawae et al., 2011; Zaim & Salleh, 2019); four in Indonesia (Finka & Prasetya, 2018; Meitasari et al., 2023; Munawiroh, 2016; Wahidah, 2018); five in the United States (Borgia et al., 2018; Doolittle et al., 2015; Hamilton et al., 2020; Mahoney, 2010; St. Vil et al., 2017), two in South Africa (Hamren et al., 2015; Laher & Khan, 2011); and, one in Italy (Villani et al., 2019), in United Kingdom (El-Khani et al., 2023), in India (Khan & Tantray, 2019), in Israel (Peleg & Peleg, 2024). The number of articles is summarized in Figure 2.

As shown in Figure 3, the majority of the studies employed a qualitative design, comprising of 21 research projects (Ahmad & Mohd Noor, 2018; A. R. A. Aziz et al., 2020; N. A. A. Aziz, 2011; El-Khani et al., 2023; Hamilton et al., 2020; Mahoney, 2010; Mohd Nor, 2013; Munawiroh, 2016; Mustaffa et al., 2017; Khan & Tantray, 2019; Laher & Khan, 2011; Leng et al., 2018; Rahman, 2012; Musa & Sa'ari, 2019;

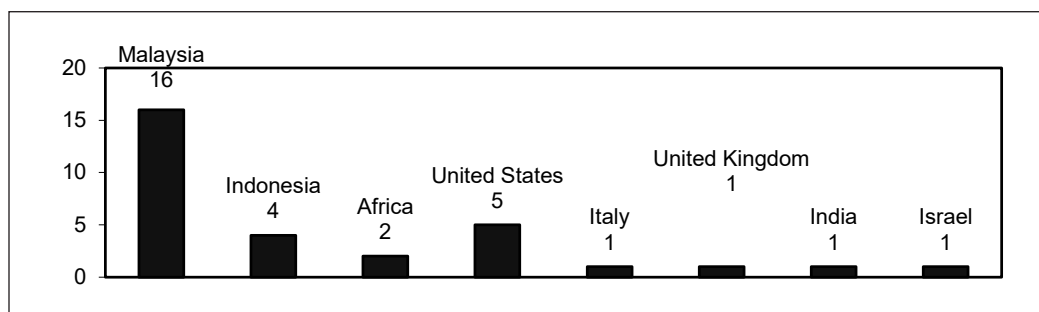


Figure 2. The number of articles in terms of place of publication

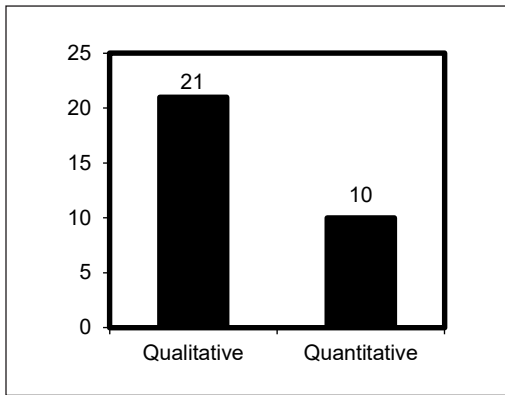


Figure 3. The number of articles according to study type

Sahid et al., 2020; St. Vil et al., 2017; Suhaimi et al., 2021; Wahid et al., 2011; Wahidah, 2018; Yalawae et al., 2011; Zaim & Salleh, 2019). The remaining 10 studies used quantitative design (Borgia et al., 2018; Doolittle et al., 2015; Finka & Prasetya, 2018; Hamren et al., 2015; Hussin et al., 2017; Jodi et al., 2014; Meitasari et al., 2023; Peleg & Peleg, 2024; Puteh & Mamat, 2015; Villani et al., 2019).

In terms of publication year, Figure 4 shows that five articles were published in 2018; four in 2011; three in 2015, 2017 and 2020 respectively; and two in 2023. In the

years 2010, 2012, 2013, 2014, 2016, 2021 and 2024, only one article was published for each year. There was no article published in 2022.

DISCUSSION

Based on the 31 selected articles, six themes have been identified for the research objectives. Below, the research objectives along with the corresponding themes are outlined.

Spirituality and its Relationship to the Resilience of Urban Poor Families

Spirituality as a Source of Inner Strength

Spirituality and resilience are transcendental components that are interconnected. These components possess significant implications for both individual and family growth with their influence often playing a reciprocal role in individual and family development. Spirituality can enhance resilience by providing a sense of purpose and inner strength, whereas resilience can strengthen spiritual beliefs by helping individuals navigate and overcome challenges. This inner strength can help people cope with

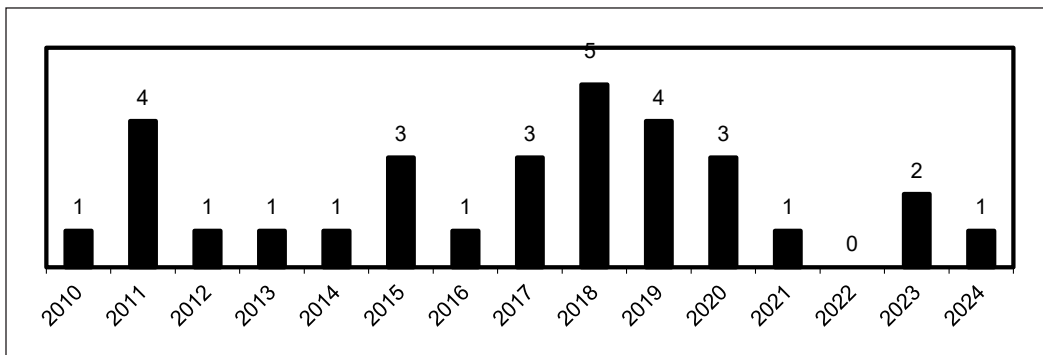


Figure 4. The number of articles based on publication year

adversity, maintain hope, and foster a sense of purpose. In the context of poverty, spirituality can offer comfort and guidance, support perseverance, and inspire individuals to seek improvement in their lives while maintaining faith in a higher power (Hamilton et al., 2020).

Although spirituality is usually associated with religion, it is not necessarily related to the concept of the divine (Asih et al., 2020). In a wider definition, spirituality is aimed at understanding the meaning of life, acting according to social norms and beliefs, and making the most of one's life in an effort to reach their purposes (Rashid et al., 2019). Therefore, the meaning of spirituality differs from person to person.

In Islam, it is imperative to prioritize and guide spiritual components such as the mind, soul, and spirit, as each of these components plays a significant role in providing inner strength to a family (Jodi et al., 2014). Islam believes that spirituality is a medium that exerts an impact on both the physical and mental health of its adherents. According to Laher and Khan (2011), a fervent belief in spiritual concepts motivates Islamic adherents to establish the foundation for a shift towards more positive behaviors and mindsets, especially during difficult times.

Islamic spiritual concepts, such as the relationships between life fate and divine will (*qada'* and *qadar*), effort and trust, sincerity and patience, gratitude and satisfaction (*qana'ah*), as well as *rahmah* (Allah blessings) form the basis for resilience in a Muslim family facing

poverty (Rahman, 2012). These concepts are grounded in the expression of *La ilaha illallah*, which means 'There is no God but Allah'. This is a declaration of Muslims' faith and a testimony to whom they worship. This testimony of faith encapsulates the basic essence of what it means to be a believing servant of Allah, commonly known as *tauhid*. The verse indirectly encourages Muslims to rely on, take refuge in, and place hope in Allah, while also emphasizing to them the need to work hard to achieve the best possible life (Rahman, 2012).

The above indicates that families dealing with urban poverty must be guided towards cultivating and appreciating Islam. The concept of *tauhid*, or the oneness of God, nourishes the soul and increases mental strength. It also cultivates positive values, which then lead to resilience. Families with high levels of resilience experience greater control over their circumstances because a greater spiritual understanding helps ease the burden of poverty (Wahidah, 2018).

The Strength of Social Relationships

Social relationships play a crucial role in enhancing resilience among families facing urban poverty. Strong social connections provide emotional support, practical assistance, and a sense of community, all of which are vital in navigating and overcoming the challenges associated with urban poverty. These relationships can offer encouragement, resources, and a shared sense of purpose, contributing to improved mental well-being and stability

(Peleg & Peleg, 2024). From this aspect, urban poor families often choose a religious community as a social unit, where they receive emotional support and motivation to persevere (Borgia et al., 2018; Hamren et al., 2015; St. Vil et al., 2017).

Based on a study by Meitasari et al. (2023), spiritual practices that involve group participation help form a solid foundation for the resilience of the urban poor. For example, congregational prayer in the mosque strengthens togetherness and fosters a sense of community, contributing to greater resilience. In addition, Suhaimi et al. (2021) suggest that spiritual development programs organized in mosques have a positive impact on the urban poor. These programs boost their confidence to engage socially and encourage them to give back to the community. Likewise, Puteh and Mamat (2015) indicate that involvement in religious communities helps poor families overcome urban poverty issues by fostering relationships and community support. The interconnection of these social relationships within religious communities strengthens the resilience of these families, enabling them to pool resources and support each other effectively.

The Meaning of Life and Hop

The importance of spiritual aspects in the lives of urban poor families cannot be overstated, as they provide them with deep meaning and newfound hope, which is crucial for enduring hardships. Faith in a spiritual purpose can act as a beacon of hope, motivating individuals to persevere

through difficulties. On this, Meitasari et al. (2023) reported that spiritual values, such as the belief in the goodness of God and the belief in spiritual rewards for acts of generosity, encourage charitable behavior even within financially challenged families. This act has a positive influence on attitudes and leads to long-term improvements in quality of life. This is due to psychological benefits derived from having a sense of purpose and direction rooted in such actions (Wahid et al., 2011). These beliefs can enhance resilience by fostering a positive outlook and reducing the impact of life's difficulties (Finka & Prasetya, 2018).

For urban poor families, a spiritual framework can provide a practical and accessible means to discover significance and optimism. Spiritual values that are centered on hope, opportunity, and divine love promise not only emotional and psychological relief but also a sustainable model for building resilience. By embracing these principles, individuals can effectively confront obstacles with greater tenacity and uphold a sense of tranquility and purpose. This suggests that spirituality can help foster a sense of altruism, provide a profound foundation for resilience and hope, offering them a pathway to endure and thrive despite the challenges they face.

Based on the aforementioned findings, it can be inferred that spirituality and its prominent aspects provide a solid foundation for urban poor families in shaping their perspectives when confronting the challenges of poverty. The significance of spirituality as a source of comfort and

strength for the urban poor not only serves as a form of emotional support but also as a form of energy that enhances resilience.

Religious Practice and Its Relationship with the Spirituality of Urban Poor Families

Religious Practice and Spiritual Strengthening

Religious practice encompasses a wide range of activities and rituals that individuals or communities perform in adherence to their faith. These practices can vary significantly between different religions and cultures, but generally include worship, prayer, rituals, sacraments, and moral conduct, to name a few.

Religious practice is vital for strengthening the spiritual aspects of individuals when meeting with hardships and trials. For example, religious practices such as prayer, recitation, and *dzikr* (remembrance of God) can build a closer relationship with the Creator, increase patience and contentment, and help individuals choose the best steps to work with their problems (Sahid et al., 2020). The same applies to religious values held by individuals, which further enhance motivation for those engaged in religious activities (Suhaimi et al., 2021).

Subsequently, religious practice emphasizes the importance of human values such as compassion, honesty, kindness, and respect for others. Many religions teach that living according to these values is essential for spiritual growth and fulfilling one's moral obligations (Khan & Tantray, 2020).

In Islam, for example, Allah SWT explains that with sufficient piety, the poor are less likely to envy the rich or harbor grudges against them (Mohd Nor, 2013). This practice is seen as fundamental to creating a harmonious society. Fraternal relationships must be maintained for the benefit of families in the context of urban poverty. Bonds of brotherhood lead to helping one another and sharing life's burdens and happiness (Yalawae et al., 2011).

A study by Hussin et al. (2017) found that religious practices that help ensure the formation of a prosperous family unit include listening to the Quran and the Hadith, speaking gently, practicing prayer and supplication, instilling love among family members, and cultivating gentleness and tolerance. These practices promote a peaceful and supportive family environment, emphasizing the importance of spiritual and religious teaching within the family context. In addition, Zaim and Salleh (2019) reported that one of the most important elements of a prosperous family is the reinforcement of faith and morals. The results of this study suggest that religious practices should be applied to nourish the family with religious values and maintain the family's well-being. By incorporating these practices into their daily life, families can establish a solid foundation of shared beliefs and values, thereby enhancing their overall harmony and resilience (Doolittle et al., 2015). This approach underscores the importance of a consistent and intentional application of religious teachings to foster a supportive and nurturing family environment.

These studies demonstrate that religious practices in a family are partly responsible for a family's well-being. The integration of religious practices into family life can foster a sense of unity, provide moral guidance, and create a supportive environment (Mahoney, 2010).

Religious Education in the Family

Religious education in a family is important in shaping the values, beliefs, and behaviors of its members. Some of its importance is to develop a moral and ethical foundation, self-identity, a sense of belonging, emotional and spiritual support, as well as strengthening family bonds. A spiritual approach emphasizes that religious education must begin as soon as the family is formed. Parents and older family members serve as role models in demonstrating religious practices and values. By observing and participating, children learn the importance of these practices and are more likely to incorporate them into their own lives (El-Khani et al., 2023; Mustaffa et al., 2017).

In the Islamic faith, the development of a family within the framework of reverence for God and the Prophet will result in attitudes of faith and repentance. An appreciation for Islam helps a family live a life based on religion and not on human desire alone (Syahbudin et al., 2022). All of these are part of efforts to protect family members from conducting activities that are not beneficial, as understood in the faith. In Surah al-Tahrim, verse 6, Allah SWT states:

Translation: "O you who have believed, protect yourselves and your families from a Fire whose fuel is people and stones, over which are [appointed] angels, harsh and severe; they do not disobey Allah in what He commands them but do what they are commanded." (*The Qur'an*, 2004: At-Tahrim 66: 6)

According to the above verse, the primary command is to protect oneself and one's family from hellfire. This is a call for individual and collective responsibility within the family unit. Individuals are therefore responsible for their well-being and are also responsible for guiding and safeguarding their families against behaviors that could lead to punishment in the hereafter.

On this basis, parents hold a crucial responsibility in ensuring that each child's self-development process aligns with the requirements of religion (Munawiroh, 2016). Grounding in religious teachings encourages individuals to consider the long-term consequences of their actions instead of seeking immediate satisfaction. This perspective helps families to make more thoughtful and beneficial decisions and avoid actions driven by temporary or harmful impulses. The principles and values imparted by religious teachings have the potential to enhance motivation toward self-improvement among the urban poor.

Despite the fact that urban poverty leads to children dropping out of school due to financial concerns, it is important that parents continue their religious education at home,

as it serves as the basis for the formation of a child's personality and the cultivation of appropriate manners and behaviors. In these challenging circumstances, religious teachings can provide hope and resiliency. This religious and spiritual support can help children cope with difficulties and remain motivated (Khan & Tantray, 2020).

Religion and Coping Skills

Religion and spirituality play a significant role in developing coping strategies and increasing the mental resilience of poor families confronted with economic and social pressures. Individuals who experience stress due to poverty often experience internal disturbances that affect their outward behaviors, such as becoming irritable easily, withdrawal or mood swings (Muriel & Christopher, 2021). They may become more defensive, less communicative, or more critical, which could lead to conflicts, strain their relationships with family and friends, and weaken their social support networks (Ho et al., 2022). In this situation, developing coping skills is essential for navigating life's challenges and sustaining a balanced life.

According to Musa and Sa'ari (2019), reflecting on and understanding the Quranic verses provides spiritual comfort and guidance. The act of reading the Quran is known to bring peace to individuals in difficult times. Making specific *dua* (supplications) and engaging in *munajat* (intimate prayers) are said to be effective in managing or reducing stress. Asking Allah for help and expressing concerns through

dua can also be a source of comfort and reassurance, helping individuals manage their worries. Similarly, regular prayers (*salah*) structure the day with moments of reflection and connection to Allah. This routine can provide stability and a sense of peace, helping to alleviate feelings of anxiety (N. A. A. Aziz, 2011).

Participating in obligatory worship, as required by Islam, demonstrates an individual's gratitude towards the sustenance they received, despite its inadequacy. It shows that one has faith in God's ability to provide (A. R. A. Aziz et al., 2020). Since poverty may be a factor for crime, social, and mental health problems, religious activities can be a valuable tool for managing stress among urban poor families.

In summary, the results of the second objective indicated that religious practices and teachings in urban families have benefits for strengthening resilience. Meaningful religious rituals and values, such as connecting with God, meditation, performing prayers, giving *sadaqah* (charitable giving), honesty, and kindness, among others, proved to be beneficial to families living in poverty. These practices possess significant personal values, provide spiritual solace to families, and align with the religious coping model.

CONCLUSION

This study conducted a systematic literature review (SLR) of 31 articles related to spirituality and religious behavior as they pertain to the resilience of urban poor families. This review analyzed publications

from several databases, including Web of Science, Scopus, APA PsycNet, and PubMed. Educational Resources Information Center (ERIC), Google Scholar, Semantic Scholar, and peer-reviewed journals, spanning the period from 2010 to 2024. The review reveals that both spiritual aspects and religious behavior are important for strengthening and increasing the resilience of urban poor families. For religious adherents, the concept of spirituality ties into the meaning of their religion, providing a framework for understanding and coping with life's challenges. For those who are not affiliated with a religion, spiritual appreciation may involve exploring reality through daily activities and serving as a guide for relieving emotions during crises. In any case, spirituality and religious behavior influence resilience, as they provide a positive framework that offers strategies to enhance the well-being of both the family and its members. In this article, the SLR approach revealed that one important aspect that could be considered to improve the well-being of urban poor families is fostering resilience through spiritual and religious means. Spirituality and religion, in relation to urban poverty, provide a framework for understanding life's obstacles and offering hope that difficulties are a natural consequence of human existence and part of a greater divine plan. This framework employs the beliefs, practices, and community support systems inherent in many religious traditions, particularly in contexts where material resources may be limited for the urban poor, to strengthen their

inner selves. Therefore, this review, which included both qualitative and quantitative studies, supported the positive associations among all variables examined.

Implications for Theory and Practice

The overview of 14-year published studies provides fundamental insights that aid in the well-being and welfare of urban poor families. Understanding the life complexities of poor families living in urban areas in terms of analyzing existing knowledge surrounding the urban poor highlights the necessity of prioritizing internal factors such as spiritual values and religious practices. Identifying these internal factors provides a foundation for addressing the challenges faced by urban poor families in relation to resilience. These factors can be a powerful source for the urban poor in sustaining their mental health and stability.

The results of the review analysis regarding spirituality, spiritual values, religious behavior and practices may help the urban poor to recognize and appreciate the importance of incorporating these aspects into their daily lives. This understanding will provide them with valuable insights and tools for improving their resilience and coping with their circumstances. The findings of this study align with the Family Resilience Theory (FRT), demonstrating how spirituality and religious practices serve as protective mechanisms that strengthen family bonds, instill hope, and enhance problem-solving abilities. According to this theory, resilience is a dynamic process shaped by family

belief systems, organizational patterns, and communication and problem-solving processes (Walsh, 2003). It is not merely an individual trait, but a collective process within the family, where shared strengths, such as religious beliefs, hope, and the search for meaning in life, help families overcome life challenges (Walsh, 2016).

Spiritual and religious elements enable families to view adversity from a more positive perspective, maintain emotional stability, and develop effective coping strategies. By incorporating FRT principles, this study underscores the importance of reinforcing spiritual and religious foundations as essential components in building resilience among urban poor families. Furthermore, the application of FRT in this study confirms that spirituality and religious practices contribute to strengthening family functioning, particularly in problem-solving, emotional stability, and social support. Recognizing and integrating these aspects into daily life can provide urban poor families with valuable insights and practical tools to enhance their resilience and overall well-being.

Subsequently, the review also assists the government, communities, and family organizations in improving aid programs by focusing on spiritual development and the well-being of target groups, extending beyond material aid. It also contributes to the improvement of existing family models by enhancing the planning and implementation of programs aimed at the holistic and productive development of urban poor families. For example, the programs could develop group activities that encourage

family members to share their spiritual perspectives and sources of hope, integrate guided reflection exercises that help families process challenges through a spiritual lens of growth and meaning-making, or create mentorship opportunities with spiritual leaders or experienced community members that incorporate spiritual perspectives on resilience. This study is expected to serve as a resource for future research related to family dynamics, particularly in designing models and interventions to strengthen the resilience of urban poor families. This aligns with the Malaysian National Family Policy, which aims to develop prosperous, healthy, and resilient families and to ensure social stability.

Limitations and Recommendations for Future Studies

As with all studies, these research findings have their limitations. It is most important to note that most of the publications derived from the databases were in local contexts since there were limited studies in other countries pertaining to the exact issues. This situation may restrict the applicability of the findings regarding the resilience of poor urban families and their relationship to spirituality. Therefore, by default, the publications were likely discussing this issue according to the local spirituality and religion. Hence, in the future, studies regarding different cohorts of regions and population demographics could be conducted for further analysis and theoretical advancement. Future studies may include more nuanced groups to investigate

the experiences of urban poor families from other cultural backgrounds who practice diverse religious traditions. This article reviews 31 articles, many of which focus on Malaysia, but few specifically address the urban poor families. Future researchers are encouraged to conduct studies on the influence of spirituality and religious behavior on the urban poor, whether through systematic literature reviews, surveys, or interviews. Furthermore, six themes were analyzed, one of which emphasizes coping strategies for urban poor families to enhance resilience, rather than focusing on the factors and causes behind the selection of these strategies. Therefore, future researchers may further investigate the resilience needs of urban poor families and the factors influencing the choice of religious or spiritual coping strategies. Understanding these needs is crucial to effectively addressing them prior to initiating any spiritual intervention programs.

ACKNOWLEDGEMENT

The authors wish to express their appreciation to the Ministry of Higher Education (MOHE), Malaysia, for awarding the grant via the Fundamental Research Grant Scheme (FRGS/1/2021/SS0/UM/02/4), which enabled this research and data collection to be conducted. This article forms part of the research findings funded by the grant.

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Review Article

Gambling-Related Financial Crimes by Politicians

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ABSTRACT

This article is a narrative literature overview providing a comprehensive analysis of gambling-related offenses committed by politicians. It aims to explore the roles and motivations of politicians involved in such criminal activities and the use of the gambling industry to launder illicit corruption proceeds. The review applies a selective search method, focusing on conceptual-empirical primary materials, and employs a narrative summary for analysis. Politicians within the gambling business engage in a range of gambling-related financial crimes, characterized by distinct typologies such as corruption, embezzlement, money laundering, and bribery. These illicit activities entail improperly utilizing public funds or exerting political influence to secure personal benefits. It reflects that the gambling industry is susceptible to political corruption due to inadequate regulatory measures and oversight procedures. Politicians' involvement in gambling-related financial crimes stems from personal, financial, and political factors, including political ambition, economic burdens, addiction struggles, criminal networks, and lack of supervision. Politicians can act as patrons, facilitating gambling activities and reducing jurisdictional constraints. They may also receive bribes from managers and use money laundering strategies, such as casino chips, fraudulent bets, and intermediaries, to legitimize unlawfully acquired funds.

Keywords: Corruption, embezzlement, forgery, gambling, politicians

ARTICLE INFO

Article history:

Received: 24 September 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.16>

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INTRODUCTION

The allegations of money laundering from corruption through the offshore gambling industry against Lukas Enembe, the former Governor of Papua in Indonesia from 2013 to 2023, sparked the authors' curiosity to explore the issue of gambling-related financial crimes by politicians. That is not to say our article will present an empirical

examination of the Lukas Enembe case or discuss similar cases based on the Indonesian context, but rather explore the broad issue of politicians' gambling-related financial crimes inspired by that case.

The gambling sector, encompassing casinos, sports betting, lotteries, and online platforms, is typically subject to legal frameworks and regulatory measures across various jurisdictions. In Indonesia itself, gambling is an illicit practice that is proscribed by the governing authorities (Curnow, 2012; Nootboom, 2015; Sallaz, 2008). The occurrence of gambling-related financial crimes by politicians is a serious concern within the realm of politics and the gambling sector.

In the context of the rapid growth of the gambling sector, politicians hold a crucial role in formulating regulatory regulations and overseeing the industry's operations. Nevertheless, there have been instances where politicians involved in the formulation of gambling regulations have been implicated in illegal and unethical conduct. Adopting a government policy that legalizes gambling to generate state revenue is frequently associated with a historical backdrop of corruption and scandal. Consequently, the decision to implement such a policy must not exclusively hinge on a straightforward evaluation of costs and benefits (von Herrmann, 1999).

Financial crimes can encompass several illicit activities within the realm of gambling. These transgressions involve politicians or government officials soliciting bribes to influence gambling legislation. The fabrication of documents to produce licenses

or the misappropriation of state funds for personal gambling endeavors are also considered forms of financial misconduct. Gambling has been argued to contribute to the proliferation of corrupt practices (Mason et al., 1989; Mikesell & Pirog-Good, 1990) or heighten the probability of political corruption (Martz, 1997).

Gambling-related crimes cover various criminal offenses rooted in gambling activities. Banks and Waugh (2019) offer a systematic taxonomy to understand the relationship between gambling activities and criminal offenses, ranging from economic crimes such as fraud and embezzlement to violence and money laundering. Gambling-related crimes are often non-violent and income-oriented, such as embezzlement and fraud, but do not exclude the potential for violence to occur as a result of gambling conflicts.

Gambling severity significantly triggers a high frequency of criminal records, especially related to economic crimes such as theft and forgery. Most of the cases involved individuals who faced financial difficulties due to excessive gambling (Lind et al., 2021). The concept of gambling-related crimes also comprises dimensions of money laundering and financial manipulation (Langdale, 2023). Casinos are often a means to launder illicit funds, especially in the context of transnational criminality. Such activity involves organized crime networks, junket operators, and underground financial systems that abuse regulatory loopholes in different countries.

In essence, gambling-related financial crimes embrace a broad spectrum of illicit

activities, spanning from the acceptance of bribes from casino proprietors to the misappropriation of governmental funds for personal gaming endeavors. Consequently, such outcomes may give rise to policy alterations that harm society and erode the credibility of governmental institutions. That is a prevalent practice among businesses and organized criminal organizations to employ bribery schemes targeting politicians to facilitate laundering illicitly obtained funds through gambling activities (Cherniavskyi et al., 2019).

These criminal acts frequently center on the convergence of politics and the gambling industry, contradicting the fundamental tenets of ethical conduct, integrity, and equitable governance. That is due to the illicit nature of such activities, which involve the utilization of funds acquired through gambling or the manipulation of financial systems to enable or obfuscate gambling endeavors. The detrimental influence of corruption exemplifies the tight association between gambling and crime. It is frequently observed in conjunction with both lawful and unlawful forms of gambling (Ferentzy & Turner, 2009).

Gambling-related financial crimes are consequential violations of public integrity. If deemed guilty, wrongdoers are subject to legal ramifications, including criminal prosecution, voluntary relinquishment of office, or the withdrawal of their political privileges. Efforts to address such criminal activities embrace rigorous law enforcement, more openness in funding political campaigns, and robust monitoring

mechanisms to mitigate political corruption, one of the societal consequences associated with gambling (Layton & Worthington, 1999).

Politicians' financial crimes in the gambling industry pose an ethical dilemma, as private interests often clash with the interests of society. The enormous economic potential of the industry encourages politicians to seek personal gain, which disrupts public trust in government and the policy process. Such crimes can result in unfair policies, exacerbate social inequalities, and increase the vulnerability of particular communities. The gambling sector also has a wide-ranging impact on individuals and families. The financial crimes of politicians in the industry can affect regulations that protect consumers from the risks of excessive gambling and economic ruin. Gambling is always associated with increased crime, government corruption, a negative impact on legitimate businesses, and a decline in work ethic (Golaszewski, 2004).

This article identifies several forms of gambling-related financial crimes that politicians commit. Its primary objective is to provide an in-depth understanding of the topic: the types of gambling-related financial crimes committed by politicians, the roles and motivations of politicians involved in such crimes, and how the gambling industry is used as a laundering platform for corruption proceeds. The research questions are: (1) What are the global patterns and implications of financial crimes in the gambling industry? (2) How do country-

specific factors shape the prevalence and nature of gambling-related financial crimes? (3) What are the predominant forms of gambling-related financial crimes that politicians commit, and how do these differ across regions? (4) What motivates politicians to engage in gambling-related financial crimes, and how do systemic and individual factors interact in this context? (5) How is the gambling industry exploited as a laundering platform for the proceeds of political corruption, and what mechanisms are employed in these activities?

Academic studies on politicians' involvement in gambling-related financial crimes are still limited. Previous studies have focused more on the impact of gambling on individuals, such as addiction and economic implications (Adolphe et al., 2019; Banks, 2017; Binde, 2016), as well as crimes by criminal syndicates, such as money laundering. In contrast, there has been little exploration of how politicians use the gambling industry for financial crimes. Although some studies have touched on public officials' corruption in gambling (Martz, 1997; Walker & Calcagno, 2013), these studies are still case-specific and do not offer a strong theoretical framework to comprehend the pattern of politicians' financial crimes globally. Furthermore, studies on how regulations and political systems in different countries influence politicians' involvement in illegal gambling are also limited.

This article analyzes 44 papers on gambling-related financial crimes, making a theoretical contribution by identifying

the structural and individual factors that drive politicians to engage in illegal practices. Using a combination of rational choice theory and institutional theory, the authors assert that politicians' decisions to engage in illegal practices are often the result of rational calculations of economic benefits and risks (Larmour & Wolanin, 2013; Vannucci, 2017). The specific weaknesses in gambling regulations, high economic incentives provided by the gambling industry, as well as weak political oversight systems, contribute to politicians' involvement in gambling-related corruption, money laundering, and abuse of power (Goldberg, 2018; Pozsgai-Alvarez, 2020; Søreide, 2014).

Through thematic analysis, the authors classify five types of gambling-related financial crimes by politicians: corruption, money laundering, document forgery, embezzlement of public funds, and violation of political ethics. The article thus enriches the comprehension of politicians' gambling-related financial crimes, showing the interaction between institutional structures and political dynamics in shaping corrupt behavior. The findings also have practical implications for policymakers to strengthen gambling regulations, improve political transparency, and reduce the opportunities for politicians to abuse the gambling industry for personal gain.

THEORETICAL FRAMEWORK

Investigating gambling-related financial crimes by politicians requires an in-depth comprehension of the relevant theoretical

framework to disentangle the complexities and factors influencing politicians' behavior. Two crucial theoretical frameworks to consider are rational choice theory and institutional theory. Both provide valuable insights into the motivations of politicians as individuals to commit financial crimes and the role of institutions and rules in shaping politicians' behavior within the complex gambling industry.

Rational choice theory emphasizes that individuals, including politicians, act rationally by weighing the costs and benefits of each action (Dowding, 2019). In the context of gambling-related financial crimes, politicians are tempted to engage in illegal behavior such as corruption, money laundering, or bribery because they believe that the economic benefits they gain outweigh the legal risks or ethical consequences (Vannucci, 2017). Politicians who receive kickbacks from the gambling industry may feel that the political or financial gains they obtain through political support or policies favorable to the gambling industry outweigh the legal risks or reputational harm that may arise.

Larmour and Wolanin (2013) demonstrate that corruption flourishes in environments where the risk of detection is low and economic incentives are high. For politicians, the lucrative opportunities the gambling industry provides often surpass the deterrent effect of legal penalties. Research by Rose-Ackerman and Palifka (2016) also emphasizes that politicians frequently engage in corruption when the benefits—such as political donations or personal

enrichment—exceed the reputational or legal consequences. It is particularly relevant in jurisdictions with weak enforcement mechanisms. For example, in jurisdictions where regulatory oversight is lax, politicians might rationally align with gambling entities to secure campaign financing or political alliances, leveraging their influence for personal or political gain.

On the other hand, institutional theory highlights the role of institutions and rules in shaping individual behavior in society (Fuenfschilling & Truffer, 2014). In the gambling industry, institutions such as gambling regulation, public policy, and political practices can influence politicians' gambling behavior. Loose rules or policies that benefit the gambling industry may create incentives for politicians to engage in behavior detrimental to the public interest to gain political support or personal gain.

Several gaps in institutional frameworks—such as unclear regulations, discretionary authority, and limited accountability—are key drivers of corruption in the political sphere. These weaknesses are often gauged by actors within the gambling industry to secure favorable outcomes (Søreide, 2014). Entrenched norms of clientelism and lobbying always influence policy decisions that undermine the public interest (Goldberg, 2018), particularly in industries like gambling, where financial stakes are high. In the gambling industry, institutional deficiencies, such as insufficient transparency or ambiguous policy guidelines, can create environments where politicians feel incentivized to

engage in unethical practices. For instance, lenient licensing laws or opaque campaign financing regulations might encourage alliances between political figures and gambling operators.

Combining rational choice theory with institutional theory allows for a comprehensive analysis of gambling-related financial crimes involving politicians. Rational choice theory elucidates the personal motivations driving corrupt behavior, while institutional theory highlights the systemic conditions that facilitate or constrain such actions. Recent scholarly contributions have reinforced such an integrative approach. The intersection of individual rationality and institutional contexts is critical in explaining why corruption persists (Jancsics, 2019), particularly in high-stakes industries like gambling. Even well-intentioned actors may succumb to corruption if institutional safeguards are inadequate.

Addressing corruption requires targeting individual incentives and structural weaknesses, emphasizing the importance of comprehensive anti-corruption strategies integrating deterrence and institutional reform (Jandhyala & Oliveira, 2021). A politician might engage in rationally calculated corruption (e.g., accepting bribes) because institutional loopholes, such as lax reporting requirements or limited judicial oversight, reduce the likelihood of adverse consequences. It demonstrates how individual and systemic factors interact to perpetuate corrupt practices.

By merging rational choice and institutional theories, we can deepen our

understanding of the factors influencing politicians' behavior in the context of gambling-related financial crimes. Further research could explore the dynamics of interactions between the rational decisions of individual politicians and the influence of institutions and rules that shape politicians' behavior in the gambling industry. We can also design more effective policies to prevent and tackle gambling-related financial crimes, thereby strengthening integrity and accountability in the political system through this approach.

METHODS

This article constitutes a narrative overview, a specific variant of a narrative literature review. It provides a condensed summary or narrative synthesis of previously published papers through a systematic process involving four key steps: (1) identification of the research questions, (2) setting the inclusion and exclusion criteria, (3) conducting search strategy, and (4) doing data extraction and synthesis (Cangelosi et al., 2024; Sukhera, 2022). The review aims to comprehensively review existing knowledge of various problems. The authors employ a selective search method, focusing on conceptual and empirical primary materials. However, it is worth noting that a well-defined research selection procedure and quality assurance measures are needed.

The process involves synthesizing or analyzing research findings through a narrative summary (Paré et al., 2015; Snyder, 2019). This overview presents a concise yet comprehensive examination of the

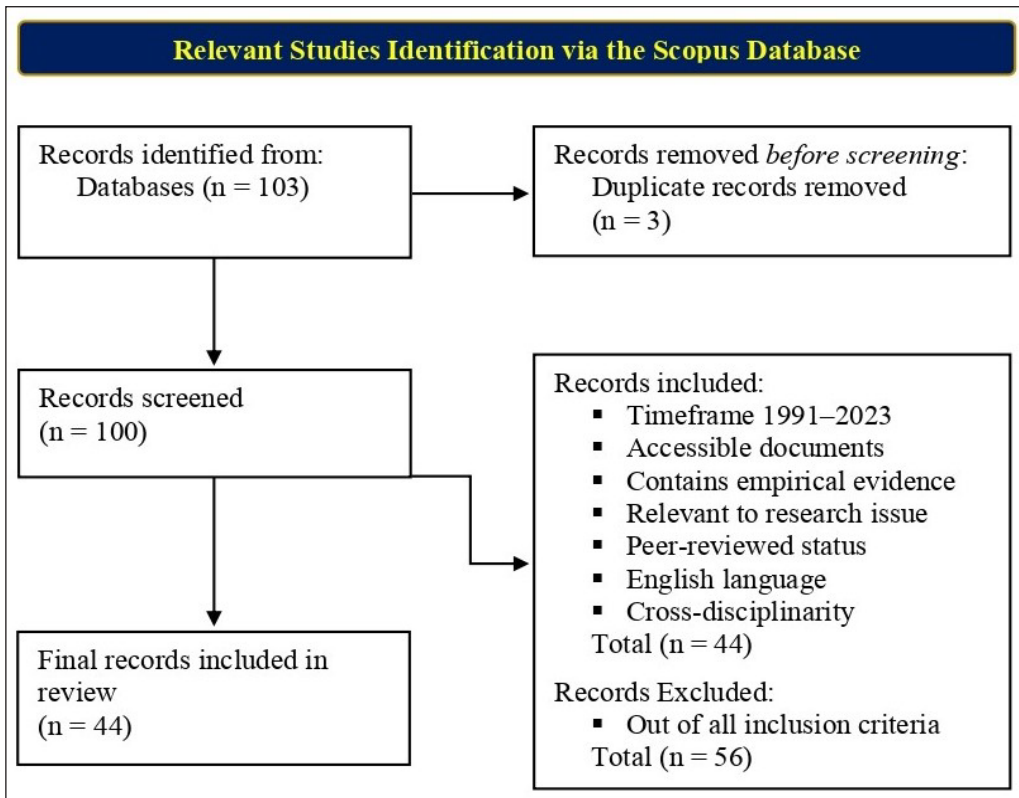


Figure 1. The process of reviewing articles

existing literature on the various categories of gambling-related financial offenses committed by politicians. Additionally, it seeks to explore the roles and motivations of politicians engaged in such criminal activities and the utilization of the gambling industry to launder the illicit proceeds of corruption by politicians (Figure 1).

The article undertakes a non-systematic survey of 44 peer-reviewed social science literature in the Scopus database, as presented in Table 1. The published materials are journal articles and research reports. However, the first type has the highest composition in our review. The authors compiled a narrative overview, adopting the

steps of previous works such as Adolphe et al. (2019), Ferentzy and Turner (2009), and Rifai et al. (2024), which cover gambling, gambling-related financial crimes, and non-gambling issues, respectively.

The thematic analysis for interpreting the data involves identifying, organizing, and interpreting the primary thematic patterns from the selected papers. Such a qualitative approach enables the authors to explore the essence of the information contained in the texts. The process began with the data collection stage, where scholarly literature on criminogenic problem gambling and gambling-related financial crimes was collected from the Scopus

Table 1
Thematic categories of prior studies

No.	Author(s) & Year	Approach	Theme
1	Roberts (1969)	Literature Review	Gambling and Organized Crime
2	Mason et al. (1989)	Case Study	Gambling's Economic Burdens
3	Mikesell & Pirog-Good (1990)	Panel Data Analysis	Gambling and Crime Against Property
4	Martz (1997)	Literature Review	Gambling and Corruption
5	Seay (1998)	Literature Review	Gambling and Crime
6	von Herrmann (1999)	Comparative Case Study	Gambling and Policy
7	Layton & Worthington (1999)	Single Equation Econometric Estimation	Gambling Expenditure and Socio-Economic Factors
8	Piscitelli & Albanese (2000)	Trends Analysis	Gambling and Crime
9	Sakurai & Smith (2003)	Case Study	Gambling and Financial Crime
10	Golaszewski (2004)	Literature Review	Gambling and Health Education
11	Lo (2005)	Case Study	Casino Politics and Organized Crime
12	Sallaz (2008)	Comparative Ethnography	Gambling Contests
13	Albanese (2008)	Panel Data Analysis	Casino Gambling and White-Collar Crimes
14	Ferentzy & Turner (2009)	Literature Review	Gambling and Organized Crime
15	Reed & Fontana (2011)	Literature Review	Illicit Financial Flows and Corruption
16	Curnow (2012)	Ethnography	Cultural Perspectives of Gambling
17	Schumacher (2013)	Economic Modelling	Corruption and Trust in Politicians
18	Walker & Calcagno (2013)	Granger Causality Analysis	Casinos and Political Corruption
19	Senia (2014)	Literature Review	Casino Gambling and Money Laundering
20	Lind et al. (2015)	Case Study	Problem Gambling and Crime
21	Levi (2015)	Literature Review	Organized Crimes and Illicit Business
22	Nooteboom (2015)	Ethnography	Everyday Risk-Taking Practices
23	Laursen et al. (2016)	Retrospective Cohort Study	Problem Gambling and Violent-Criminal Behaviour
24	Wang & Antonopoulos (2016)	Literature Review	Illegal Gambling and Organized Crime
25	Binde (2016)	Media Study and Qualitative Interviews	Gambling and Embezzlement in the Workplace
26	Vannucci (2017)	Literature Review	Corruption Study Approaches
27	Rorie (2017)	Literature Review	Gambling and Regulations
28	Cherniavskiy et al. (2019)	Systemic-Structural Methods	International Crime and Cooperation
29	Banks & Waugh (2019)	Literature Review	Gambling and Crime

Table 1 (continue)

No.	Author(s) & Year	Approach	Theme
30	Adolphe et al. (2019)	Literature Review	Gambling and Crime
31	Fatima et al. (2019)	Survey	Gambling and Criminogenic Thinking
32	Cohen (2019)	Literature Review	Gambling and Organized Crime
33	Tiwari et al. (2020)	Literature Review	Money Laundering
34	Pozsgai-Alvarez (2020)	Literature Review	Corruption and Power Abuse
35	Simon (2021)	Literature Review	Gambling and Policy
36	Lind et al. (2021)	Survey Data Analysis	Gambling and Crime
37	Bedford (2021)	Literature Review	Gambling and Political Economy
38	Dodge & Pontell (2021)	Literature Review	Political Crime and Corruption
39	Binde et al. (2022)	Court Data Analysis	Gambling and Crime
40	Selin (2022)	Interpretive Political Analysis	Gambling and Policy
41	Kolandai-Matchett & Abbott (2022)	Narrative Review	Gambling and Policy
42	Langdale (2023)	Government Reports Analysis	Casinos and Money Laundering
43	Berdaliyeva et al. (2023)	Sociological and Statistical Methods	Illegal Gambling and Corruption
44	Ukhova et al. (2024)	Critical Literature Review	Gambling and Policy

database. After data collection, the authors read each piece of literature thoroughly to comprehend its context and substance. The next step comprised labeling or categorizing pieces of text reflecting main themes. The process allowed the authors to identify common patterns or differences in all papers (Malterud, 2012; Naeem et al., 2023). Furthermore, the authors organized these themes systematically to portray the holistic shifts and continuities of ideas over time.

RESULTS

Financial Crimes in the Gambling Industry: Global Insights and Implications

Prior studies on the issue of gambling-related crimes have predominantly focused

on criminal acts by problem gamblers from certain elements, including prisoners, casino customers, company employees, university and school students, middle-aged women, adolescent males, young adults, immigrants, and others that occur in some regions of the Americas, Europe, Asia, and Australia as a negative consequence of their gambling addiction (Adolphe et al., 2019; Banks, 2017; Binde, 2016; Fatima et al., 2019; Lind et al., 2015).

Empirical studies explicitly focusing on gambling-related financial crimes committed by politicians are limited. Nevertheless, existing research on political corruption and financial misconduct can offer valuable additional insights. Johnston's (2005) and Rose-Ackerman's (1999) books underscore

the globally widespread nature of political corruption while highlighting politicians' vulnerability to financial misappropriation for personal enrichment. Scandals of this kind damage the reputation of political institutions, trigger public disillusionment, and effectively hinder efforts to eradicate corruption (Heidenheimer & Johnston, 2002).

Six studies specifically explore gambling-related crimes by politicians for their involvement in the regulation or management of legal and illegal gambling, namely Banks and Waugh (2019), Berdaliyeva et al. (2023), Martz (1997), Sakurai and Smith (2003), Seay (1998), and Walker and Calcagno (2013). The occurrence of several cases of gambling-related financial crimes by politicians has had a remarkable impact on endangering the integrity of political institutions, eroding public trust, destroying democratic norms, weakening regulatory frameworks, and exacerbating social inequality.

The first study by Martz (1997) highlights the close relationship between political corruption and the legal gambling industry in the US. He reveals that companies such as Primadonna Resorts once offered \$20 million to two political figures for a casino license in Indiana. In Nevada, the "state capitalism" system in the gambling industry has raised concerns about lobbyists and contingency-based fees, which eventually came to the attention of the Illinois Gaming Board. Martz identifies two prominent factors in legal gambling-related corruption: economic incentives that discourage corrupt practices and ethical motivations to uphold

integrity. Corruption is not a direct result of gambling, but it thrives in states that are more tolerant of corrupt practices. The legalization of gambling creates a dilemma between increasing revenue and reducing crime, but also opens up opportunities for corrupt transactions between businesspeople and public officials. The legalization of gambling has led to scandals and undermined public trust in elected officials. Therefore, moral and economic incentives and revision of anti-corruption regulations are needed to prevent biased decisions. Martz proposed increased supervision, delegating legalization authority to local policymakers, and limiting the monopoly profits of gambling entrepreneurs as optimal steps to suppress illegal transactions.

Other research also highlights that the growth of the gambling industry often increases white-collar crimes such as forgery, fraud, and embezzlement. Seay (1998) found that the phenomenon frequently occurs as casino gambling increases. The social and economic impacts of legalized gambling must be taken seriously by policymakers. Meanwhile, Sakurai and Smith (2003) broaden the comprehension of gambling-related financial crimes by identifying various corrupt practices, money laundering, and fraud occurring in the gambling context, providing a more comprehensive picture of the spectrum of crimes associated with the industry.

Walker and Calcagno (2013) investigate the relationship between the expansion of the commercial casino industry in the United States in the 1990s and political corruption at the state level. The predicted adoption of

Granger casinos statistically contributes to an increase in corruption convictions. Their research supports previous findings of the complex relationship between the casino industry and adverse political behavior. They highlight the potential risks arising from the expansion of the casino industry regarding the possibility of abuse of political power and corruption. Strict regulatory enforcement and careful oversight of the casino industry are noteworthy in preventing abuse of political power while maintaining the political system's integrity at the state level.

Banks and Waugh (2019) classify various gambling-related crimes into seven different categories, providing a foundation for more effective law enforcement and regulation to address gambling-related crimes. These categories include illegal gambling, criminal activities undertaken to fund gambling endeavors, and offenses linked to the expansion of legal gambling. These crimes occur in conjunction with the spatial or situational aspects of gambling expansion or specific gambling establishments, offenses that transpire within the framework of lawful gambling operations, crimes that are behaviorally associated with an individual's engagement in gambling, and instances of graft and corruption aimed at expediting permits and licenses, relaxing gaming regulations, misusing gaming funds, and engaging in influence peddling.

The last study was conducted by Berdaliyeva et al. (2023). Using the theoretical framework of dialectical

materialism to explore social and legal realities, they examined criminological strategies to address corruption in illegal gambling in Kazakhstan, where the lack of criminological attributes, characteristics of corrupt actors, and prevention recommendations at the community and criminology levels became the basis of their research to formulate criminological intervention measures and corruption prevention strategies in the gambling industry. High-level corruption in illegal gambling includes lobbying, patronage, nepotism, hidden donations, appointment of former officials, and obtaining special permits or licenses. Factors that trigger corruption comprise weak supervision, abuse of authority, obstruction of justice, excessive regulation, legal loopholes, and closed decisions without clear reasons. Although there are challenges in implementing anti-corruption practices from other countries, gradual integration into Kazakhstani law can be done through regulatory improvements and systematic anti-corruption strategies.

All studies emphasize the significance of influential political figures who succumb to corruption due to their involvement in the gambling industry. Notable research needs a more holistic comprehension of the precise mechanisms that attract corrupt politicians to the casino sector and the efficacy of anti-corruption programs in effectively addressing their engagement in the industry. Those studies also highlight the need for extensive research on the precise determinants contributing to corruption in the gambling industry. These determinants

encompass deficient management controls, misuse of authority, inconsistencies between legal statutes, and deficiencies in regulatory frameworks. Additional research is required to comprehensively understand the intricate interplay between these variables and formulate precise solutions to mitigate the likelihood of corrupt practices. The identified gaps present avenues for more scholarly inquiry to understand the origins and repercussions of corruption within the framework of legalized gambling. These gaps also offer prospects for formulating efficacious measures to mitigate their occurrence.

Country-Based Issues in Prior Studies

Gambling has different social, economic, and political impacts in different countries, creating unique dynamics related to financial crimes. Cross-country analyses confirm that regulation, political culture, and socio-economic conditions are crucial in mapping the antecedents and consequences of gambling-related financial crimes.

In the US, casino legalization is often followed by intensive corruption among public officials (Cohen, 2019; Roberts, 1969). Casino adoption is remarkably associated with increased corruption cases, indicating regulatory capture (Walker & Calcagno, 2013). Regulatory agencies become overly dependent on casino operators, resulting in weak regulation and providing room for crimes such as money laundering and tax evasion. Moreover, Martz (1997) illustrated traditional and modern patterns of corruption in the US. In one case,

casino companies offered extraordinary financial incentives to state officials to obtain operating licenses. It designates how legalized gambling is used to buy political influence, which undermines government transparency and accountability.

In Canada, the opening of major casinos, such as Casino Niagara, has triggered an outstanding increase in the number of criminally inadmissible persons attempting to enter the country. After the opening of casinos, the trend of denying entry to criminals increased faster than the border traffic. While casinos raise local economic activity, they also create crucial challenges regarding border control and the involvement of organized criminal groups (Piscitelli & Albanese, 2000).

The UK has taken center stage in money laundering through shell companies. These companies are often used to launder money generated from illegal activities, including gambling. Between 2010 and 2014, shell companies were laundering £80 billion of stolen money. It indicates the weakness of anti-money laundering regulations despite the UK's advanced financial system (Tiwari et al., 2020).

In Denmark, problem gamblers are more likely to commit economic crimes like theft and fraud. Such a group is not only likely to engage in economic crimes but also violent offenses, highlighting the crucial social impact of problem gambling (Laursen et al., 2016). In Sweden, the majority of problem gambling-related crimes involve fraud and embezzlement (Binde, 2016). Middle-aged women are a high-risk group involved in

these crimes, often due to financial pressures from problem gambling (Binde et al., 2022).

Gambling policy in Finland reflects the tension between increasing state revenue and reducing social harms. Selin (2022) analyzed parliamentary debates, showing that politicians often used rhetoric about the harms of gambling to justify the existing regulatory system, while remarkable changes were rarely made. Problem gambling considerably impacts individuals and society. It often leads to financial hardship, encouraging individuals to commit economic crimes such as fraud and embezzlement. These crimes reflect individual and more serious social problems, including economic inequality and weak social support systems (Lind et al., 2015).

In Ukraine, illegal gambling is one of the prominent challenges in the context of organized crime and corruption. The country has become a strategic location for criminal groups to operate illegal gambling and money laundering activities. Various forms of international cooperation have been implemented in the country to tackle gambling-related cross-border crimes, including international legal assistance, extradition of criminals, and information exchange between countries (Cherniavskiy et al., 2019). The government signed international agreements to strengthen law enforcement against illegal gambling by adopting strict human rights standards in legal proceedings.

Kazakhstan faces considerable challenges in tackling illegal gambling-related corruption. Berdaliyeva et al.

(2023) note that anti-corruption initiatives involving digital technologies such as blockchain and e-government have been introduced to combat corruption in illegal gambling. However, the effectiveness of these initiatives is still hampered by gaps in law implementation and a lack of transparency within government agencies. In Pakistan, Fatima et al. (2019) highlighted the relationship between gambling and criminogenic mindsets. Gamblers had higher scores in two subscales of criminogenic cognitions: the notion of entitlement and insensitivity to the impact of crime. Gambling affects an individual's economy and exacerbates mindsets supporting criminal behavior.

Gambling in China has a long and complex history, mainly related to the emergence of organized criminal groups that use gambling as a significant source of income. The economic reforms that began in 1978 opened up new opportunities for illegal gambling, which became an essential activity for criminal groups in all regions of China. Relevant studies offer remarkable insights into the dynamics of illegal gambling, criminal organizations, and regulatory challenges.

Wang and Antonopoulos (2016) provide an in-depth analysis of illegal gambling organizations in China, covering three prominent types of entities: local gambling venues, cross-regional gambling networks, and online gambling platforms. These organizations face external challenges, including financing, marketing, debt collection, and police surveillance, but

can achieve optimal efficiency through adaptive strategies. There are undoubtedly close links between gambling networks and other criminal activities, such as money laundering and drug trafficking.

Furthermore, Lo (2005) analyzed the state's role in managing the casino industry in Macau. He illustrates how post-colonial reforms, including intervention by the People's Republic of China, successfully reduced the infiltration of criminal groups in the casino industry. By opening up the casino sector to foreign investors and increasing market competition, the Macau government strengthened its autonomy over local casino capitalists, who had previously had a monopoly on casino management. The study emphasizes the significance of market competition and strict regulation in curbing organized crime in the gambling sector.

In Indonesia, gambling is often integrated into the local economy despite being illegal. Curnow (2012) describes how practices such as lottery and cockfighting in Flores became a way for local communities to generate income, often with the implicit support of local politicians. It explains how gambling can be utilized as a political-economic tool at the local level (Sallaz, 2008) and a form of everyday risk-taking (Nooteboom, 2015).

In Australia, gambling has always been a popular entertainment (Layton & Worthington, 1999; Sakurai & Smith, 2003). Nevertheless, casinos have transformed into money laundering centers, especially in the VIP market involving junket operators. Langdale (2023) notes that these operators often work with underground banks linked

to transnational criminal networks, such as Chinese criminal groups in Hong Kong and Macau. The situation is exacerbated by competitive pressures between casinos that force regulators to relax controls to attract foreign investment.

Gambling is often an entry point for financial crime and corruption, especially in the context of weak regulation and political influence. While in some countries, such as China and Finland, reforms have been made to mitigate the adverse impacts of gambling, many jurisdictions still face challenges in balancing economic interests with the need to protect society. An approach based on transparency, accountability, and vigorous law enforcement is urgently needed to manage the issue effectively.

DISCUSSION

Forms of Gambling-Related Financial Crimes by Politicians

Gambling-related financial crimes by politicians encompass various typologies, providing insights into the diverse ways politicians can use their position for personal gains in the gambling industry. These crimes involve multiple illicit activities committed by public officials who have the political authority to make policies that exploit the gambling industry for personal gain (Bedford, 2021). Such crimes involve corruption, embezzlement, money laundering, and bribery, among others, which often misappropriate public funds by covering up gambling activities or utilizing one's political influence to profit handsomely from the industry.

Corruption represents a highly detrimental and dangerous phenomenon that considerably threatens the overall national security of a state. It reflects illicit activities perpetrated by those in positions of authority who misuse their official capacities and responsibilities to undermine the lawful interests of citizens, society, the state, public service, local self-government entities, businesses, and other establishments (Pozsgai-Alvarez, 2020). Corruption is prevalent in several scenarios associated with the advancement of business enterprises, including gambling. Politicians overseeing or allocating public funds can use their authority to redirect these monies and endorse or enable illicit gambling. That includes the utilization of public funds for the construction of illicit gambling facilities, the provision of subsidies or incentives to unlawful gambling enterprises, or the manipulation of budgets to favor private interests associated with gambling activities.

Graft and corruption are strategic mechanisms to facilitate the expeditious issuance of permits and licenses, ease the enforcement of gaming laws and regulations, engage in improper utilization of gaming funds, and engage in influence peddling (Campbell & Marshal, 2007). Both are criminal activities commonly linked to the governmental processes of licensing and regulating lawful gambling establishments. These activities comprise offering bribes to get licenses or circumvent regulatory inspections, typically involving individuals within government institutions.

Various types of gambling-related financial crimes by politicians can be

categorized as white-collar crimes. This concept reflects offenses committed by people of high social status during their term of office. White-collar crimes encompass non-violent and non-clandestine offenses, such as stealing through deceptive means, crimes against public administration, including the obstruction of government operations, and regulatory violations that affect public health, safety, or welfare (Geis, 2016).

There exist three primary categories of white-collar crimes, namely: (1) fraud, which covers acts of theft achieved through deceptive means or the possession of unlawfully obtained property; (2) embezzlement, referring to the act of diverting or misappropriating property that has been entrusted to an individual's care; and (3) forgery, which involves the creation of counterfeit legal documents or the alteration of existing ones, including the counterfeiting of currency. Each offense entails the acquisition of monetary funds or assets through deceptive means or a violation of financial trust, as opposed to using physical force or covert tactics typically associated with street crime (Albanese, 2008).

Embezzlement is a criminal offense of funds misappropriation by an individual with a position of trust within a professional setting (Brightman, 2011). Gambling-related financial embezzlement generally follows a pattern where the gambler's cognitive and emotional state interacts with financial losses and opportunities for embezzlement at work. Gambling becomes part of a criminal lifestyle characterized by

Table 2
Forms of gambling-related financial crimes by politicians

Category	Description
Corruption	Politicians accept bribes or illegal gifts from gambling-related parties to protect their interests or provide unfair business advantages.
Money Laundering	Politicians use the gambling industry as a means to launder the proceeds of corruption or other illegal activities by introducing unauthorized funds into the gambling business.
Fraud and Forgery	Politicians engage in fraud or falsification of gambling-related documents to gain a financial advantage or protect their interests.
Embezzlement	Politicians divert public or gambling-related organizational funds for personal or group interests.
Ethics Violations	Politicians violate ethical codes or norms by accepting gifts, free travel, or other benefits from parties associated with gambling that could influence their political decisions.

the conspicuous expenditure of illicit funds. Problem gamblers who experience financial difficulties due to large losses often turn to criminal activity to obtain funds. Over time, they become increasingly motivated to defraud and conceal the true extent of their gambling activities and the questionable means by which they obtain funds (Binde, 2016).

In summary, the gambling sector frequently encompasses substantial monetary amounts, both wagers and proceeds derived from gambling activities. Politicians in corrupt practices may perceive gambling as a prospective avenue for substantial financial benefits through bribery, illicit gratuities, or extortion. Particularly in cases of inadequate regulation, the gambling sector presents an environment susceptible to political corruption owing to insufficient supervision and transparency. In instances without robust regulatory measures and comprehensive oversight mechanisms, evil or corrupt political actors can harness such a vulnerability to partake in illicit conduct

or manipulate their authority. Some forms of gambling-related crimes by politicians are presented in Table 2.

The Role of Politicians and Their Motivations Engaging in Gambling-Related Financial Crimes

Gambling was considered a limited but effective method of acquiring wealth and social standing (Cross, 2000). Consequently, politicians sought to regulate or oversee the gambling business to fulfill this objective. The involvement of politicians in gambling-related financial crimes demonstrates variability contingent upon particular contextual factors and circumstances. However, politicians can assume two primary functions in such practices.

Firstly, as an individual who accepts bribes. There is a possibility that politicians could engage in the acceptance of bribes or illicit gifts from entities associated with gambling, such as casino owners or gambling operators, to exert influence over their political actions in a manner that favors

the gambling sector (Schumacher, 2013). That encompasses issuing operational licenses, modifying gaming regulations, and safeguarding specific commercial concerns. Furthermore, in the role of a patron or facilitator, politicians have the potential to assume the roles of both guardians and facilitators for individuals and organizations engaged in illicit activities associated with gambling. The presence of legal protections can either safeguard or impede law enforcement endeavors in addressing illegal gaming operations or money laundering activities related to the gambling sector (Rorie, 2017).

Both roles are expressions of their misuse of political authority. Politicians implicated in gambling-related financial crimes invariably abuse their power and authority to derive financial advantages from the gambling industry (Kolandai-Matchett & Abbott, 2022). They have a crucial part in the governance of the gambling sector, encompassing many responsibilities: formulating policies, granting licenses, and ensuring adequate operational supervision. Politicians' participation in corrupt activities can result in the exploitation of their authority and sway for personal enrichment or specific factions within the gambling realm (Dodge & Pontell, 2021).

White-collar crime includes fraudulent activities such as embezzlement and forgery, which are frequently observed among politicians involved in the gambling sector. It establishes a noteworthy connection between their official responsibilities and financial misconduct. Politicians may be

granted preferential treatment as a gesture of gratitude for their active participation in the oversight and administration of the gambling industry, regardless of its legality (Pierce & Miller, 2004). Such a treatment manifests in financial incentives, complimentary travel arrangements, and various other perks bestowed upon them by industry stakeholders.

Politicians have been known to partake in acts of bribery when they accept illicit payments from gambling operators in return for enacting legislation, granting licenses, or making regulatory decisions that are advantageous to these companies. These actions threaten the integrity of the democratic process, undermine public confidence in governmental institutions, and engender an inequitable environment inside the gambling sector. Accepting bribes and kickbacks constitutes a breach of ethical and legal responsibilities, potentially leading lawmakers to prioritize the concerns of gambling operators above those of the general public (Simon, 2021).

Politicians are said to receive financial remuneration or material favors from gambling enterprises or affiliated persons, purportedly in return for extending support or safeguarding their illicit operations (Pierce & Miller, 2004). These illegal payments can exert influence on gambling policies, get operating licenses, or circumvent law enforcement. Politicians who engage in illicit gaming operations will abuse their positions to help the process of money laundering. Illicitly acquired cash from gambling operations may populate

Table 3

Motivations of politicians engaging in gambling-related financial crimes

Category	Criteria	Description
Internal Factors	Political Ambition	Politicians with significant political ambitions may engage in gambling-related illicit activities to gain campaign funds or gain financial advantages to enhance their political standing.
	Financial Gain	Politicians involved in gambling activities may view the gaming sector as a profitable avenue, abusing their power to manipulate regulatory processes or secure financial resources for personal gain.
	Economic Pressure (Debt)	Politicians facing economic strain or personal debt may gamble to secure funds.
	Personal Addiction	Politicians may resort to gambling to manage personal challenges, such as gambling addiction, which can lead to poor financial decisions and criminal activities.
External Factors	Involvement in Criminal Networks	Politicians implicated in gambling-related financial crimes may be linked to criminal networks involved in illicit gaming, potentially collaborating for money laundering or monetary gain.
	Lack of Oversight and Transparency	Insufficient supervision and transparency in the gambling sector can lead to politicians engaging in illicit financial activities, misappropriating public funds, or harnessing their authority for personal gain.

fictitious personal or corporate accounts, allocate investments in lawful enterprises, or navigate intricate financial transactions to obfuscate their source (Tucker, 2022).

Politicians who are involved in gambling-related financial crimes might exhibit diverse motivations, typically stemming from personal, financial, or political factors (Adams, 2007). Several internal and external factors can encourage politicians to engage in these crimes, including individuals' political aspirations, the pursuit of financial benefits, economic burdens such as debt, personal struggles with addiction, engagement in criminal networks, and inadequate supervision and transparency within the gambling sector

(Orford, 2019). Not all politicians partake in illicit financial activities associated with gambling, and these variables represent only a fraction of the potential incentives. The description of these internal and external factors is presented in Table 3.

The Gambling Industry as a Laundering Platform for Corruption Proceeds of Politicians

Can politicians use the gambling industry to launder their corruption proceeds?

The answer is, of course, yes. Politicians may rake the gambling sector to launder illicit gains from corrupt activities. Money laundering is the systematic procedure of transforming illicitly obtained money into

assets that appear legitimate (Tiwari et al., 2020). That pertains to an alternative classification of financial crimes committed by politicians that revolve around the use of gambling establishments, such as casinos or online betting platforms, as a means to launder unlawfully obtained funds (Wang & Antonopoulos, 2016).

This criminal activity threatens the financial system's integrity and can smooth out organized criminal operations. The illicit gambling sector frequently exhibits ties with broader crime syndicates, encompassing drug trafficking, money laundering, and various other unlawful endeavors. Politicians implicated in corrupt practices may become entangled in such networks, leveraging the gambling sector to launder illicitly acquired funds or secure backing and safeguarding from criminal organizations (Comolli, 2018). Money laundering is hiding the source of funds that have been gained unlawfully by transferring them via a maze of intricate banking transfers or business deals (Chandna, 2017). Criminals use casinos, online gambling sites, or other betting locations in the gaming industry to convert illicit earnings into honest or legal money. Politicians engage in the illegal practice of injecting unlawful cash into the gambling system, using a sequence of transactions to create an illusion of legitimacy, and afterward withdrawing laundered funds, therefore effectively concealing the initial illegal source of the funds (Schneider, 2020).

Politicians can potentially employ casinos or other gaming facilities to

legitimize the illicit gains derived from actions such as corruption or embezzlement (Walker & Calcagno, 2013). By depositing these unlawfully obtained proceeds into the gambling system, politicians might engage in a process commonly referred to as money laundering, wherein the funds are effectively legitimized and appear to have been acquired legally. Money laundering within the gambling industry enables illicit behavior and presents a substantial threat to the soundness of the financial system and the security of a nation (Senia, 2014).

The gambling sector possesses characteristics that make it an appealing avenue for money laundering. These variables include substantial transaction volumes, intricate transaction processes, limited transparency, and a widespread operational reach on a global scale. The gambling sector encompasses significant financial transactions in the form of wagers and distributions of wins. Politicians seeking to conceal their illicit gains can gauge the substantial transaction volumes within the gambling sector as a means to obfuscate the unlawful source of these monies (Wang & Antonopoulos, 2016). The gambling sector frequently embraces intricate transactions, including the movement of funds between many accounts, the involvement of intermediaries, and the acquisition of gaming chips or credits. The complicated nature of corruption enables politicians to obfuscate the origins of illicit funds and impedes the efforts of competent authorities to trace and uncover the money trail effectively.

Certain areas within the gambling business may disclose a diminished degree of openness about the provenance of the cash employed. Hence, politicians seeking to engage in money laundering can harness such a legal loophole to covertly introduce illicit cash into the casino sector without being detected (Levi, 2015). Casinos face enduring risks from international criminal activities due to the substantial amounts of money illicitly funneled through them (Langdale, 2023). The casino sector is often associated with organized crime, which encompasses many illicit activities such as money laundering, loan sharking, prostitution, and other forms of triangular transactions (Lo, 2005, 2020). Moreover, casinos can attract a disproportionate percentage of individuals characterized by low levels of self-control, which may include individuals with a criminal background (Piscitelli & Albanese, 2000).

The gambling sector exhibits a propensity towards cross-border operations. Politicians engaged in corrupt practices may use gambling establishments in foreign nations to launder illicitly obtained funds and obtain lawful assets beyond the reach of their jurisdiction (Reed & Fontana, 2011). Money laundering through gambling is a core mechanism used by politicians to legitimize their illicitly acquired funds from corruption. It contains a sequence of deliberate steps to transform funds derived from illicit endeavors, such as acts of corruption, into legal assets. This practice embraces various methods, rather than relying on a singular approach, that include

the acquisition of casino chips, fabrication of fictitious wagers, investments in gambling enterprises, utilization of intermediaries, and engagement with corporations (Block, 2020).

Politicians can utilize illicit funds to acquire casino chips, afterward engage in gameplay, and subsequently convert the chips back into cash, creating the illusion that the funds originated from gambling proceeds (Davies, 2021). They divert illicitly obtained funds into fictitious wagers made at casinos or online gambling platforms, strategically losing these bets to transform unlawfully acquired assets into seemingly lawful earnings. Politicians implicated in corrupt practices often use the illicit gains from their unlawful activities to engage in lawful gaming enterprises, thereby utilizing these ventures to enhance the perceived legitimacy of their holdings.

It is not uncommon for politicians to exert intermediaries to obfuscate the sources of their illicit gains. These intermediaries may establish new entities or exert control over existing corporations, thereby concealing the trustworthy source of the earnings. These corporations are utilized to acquire real estate, high-value assets, or enterprises involved in gambling activities, establishing an additional level of complexity that hinders the traceability of illicit funds.

Research Implications and Recommendations

This article reveals the involvement of politicians in gambling-based financial

crimes, which have serious implications for governance and public trust. The findings show that weak regulation, ineffective supervision, and high economic incentives in the gambling industry create opportunities for politicians to engage in corruption, money laundering, and embezzlement of public funds (Berdaliyeva et al., 2023; Langdale, 2023). These insights are relevant to academics and have major implications for policy formulation in various countries, especially in tightening gambling regulations to prevent the abuse of power by politicians.

The weak oversight mechanism of the gambling industry causes a high number of cases of financial crimes by politicians. Cohen (2019) asserts that the legalization of casinos in the US is often accompanied by increased corruption due to excessive dependence between regulators and casino managers. To overcome it, the government must implement stricter transparency standards in granting gambling licenses, including reporting the source of investment funds, and strengthen "Know Your Customer (KYC)" and "Anti-Money Laundering (AML)" policies to prevent money laundering by politicians (Tiwari et al., 2020).

One of the primary motives for politicians to engage in gambling-based financial crimes is the need for campaign funds. The expansion of the casino industry has contributed to increased bribery and illegal funding in state politics in the US (Walker & Calcagno, 2013). Therefore, political funding regulations should be tightened by ensuring transparency of campaign funding sources, limiting

contributions from gambling companies, and increasing oversight of political funding flows that potentially originate from illegal activities (Reed & Fontana, 2011).

In many countries, law enforcement against financial crimes in the gambling industry is still weak. For example, casinos in Australia have become money-laundering centers for international criminal syndicates due to weak oversight systems (Langdale, 2023). Policies need to focus on increasing the effectiveness of law enforcement agencies in detecting and prosecuting corruption, money laundering, and misuse of funds involving politicians through the establishment of special investigation units, increasing the capacity of supervisors, and cross-country cooperation in dealing with transnational money laundering (Berdaliyeva et al., 2023).

In addition, given the high potential for conflicts of interest, restrictions on politicians' involvement in the ownership or management of gambling businesses must be considered. Politicians' engagement in this sector often triggers corruption scandals that undermine the integrity of democracy (Martz, 1997). The government can implement regulations prohibiting active politicians from owning shares or being directly involved in gambling to reduce the risk of abuse of power.

The lack of public awareness and participation in monitoring politicians' activities is also an obstacle to eradicating gambling-based financial crimes. Corruption in this industry often occurs due to weak public supervision and a lack of access to transparent information (Cherniavskyi

et al., 2019). The government must encourage public participation in reporting suspected corruption in the gambling sector by providing whistleblower protection and ensuring open access to information regarding the relationships between public officials and the gambling industry.

Through these policy steps, the government can minimize the risk of politicians committing financial crimes in the gambling industry, strengthen the political system's integrity, and increase transparency, accountability, and public trust in government institutions.

CONCLUSION

Gambling-related financial crimes by politicians undermine political integrity, destroy public trust, and potentially harm society at large. The direct threat to democratic values of transparency and accountability arises from the engagement of politicians in gambling-related financial crimes. Elected leaders are responsible for serving the public interest and making decisions promoting collective welfare. The act of prioritizing personal gain through unlawful operations inside the gambling sector poses a serious threat to the fundamental democratic principles upon which society is founded. In other words, the participation of politicians in such activities erodes public confidence and contravenes democratic tenets.

The involvement of politicians in gambling-related financial crimes incurs substantial costs, given their considerable authority and influence in the regulation of

the gambling sector and the development of relevant laws. Recognizing and preventing such practices through effective regulation, strong oversight, and strict enforcement is essential. Governments must implement comprehensive legislation to combat corruption, encompassing precise definitions and criminalization of bribery, embezzlement, and money laundering. The legislation must address several specific measures to address these illicit activities inside the gambling industry. The severity of penalties for infractions should be sufficient to serve as an effective deterrent for potential offenders.

ACKNOWLEDGEMENT

The authors thank all parties who have supported this publication, especially the anonymous reviewers for their valuable comments and the leaders of Universitas Mbojo Bima, Indonesia, for their unwavering moral and financial support, which was instrumental in the article's successful completion.

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Contestation Between Theater Artists and the State in Representing Heroic Identity in History Books

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ABSTRACT

This study examines the contestation between theatre artists and the state in representing heroic identities within history books, focusing on how these portrayals obscure heroes from their social realities. Using Wisran Hadi's theatrical performance of Imam Bonjol as a case study, this qualitative research collects primary data through interviews with key stakeholders and secondary data from media reports and documentation. Employing an intertextual approach, the study explores hypograms and cohypograms to reveal tensions between state narratives and artistic interpretations. The findings indicate that while state narratives maintain rigid and idealized portrayals of heroism, artistic representations challenge this by humanizing historical figures. The research contributes to cultural memory and performativity studies, demonstrating how theatrical counter-narratives act as ideological resistance. Aligning with Ricoeur's (1984) theory of narrative identity and White's (1987) historiographical perspectives, this study highlights how artistic reinterpretations subvert state-controlled historical representations. Furthermore, it underscores the role of intertextuality in shaping cultural memory and the performative nature of historical discourse. These findings suggest that history books should adopt a more nuanced portrayal of heroes, integrating their complexities to foster a more objective and grounded understanding of heroic identity.

ARTICLE INFO

Article history:

Received: 29 August 2024

Accepted: 03 March 2025

Published: 19 September 2025

DOI: <https://doi.org/10.47836/pjssh.33.4.17>

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Keywords: Artistic counter-narratives, contestation of historical narratives, fictionality, heroic identity, heroic identity construction

INTRODUCTION

In contemporary society, the portrayal of historical figures plays a crucial role in shaping collective memory and cultural

identity. Heroes are often depicted as idealized individuals embodying moral excellence, courage, and resilience, symbolizing national pride and unity. However, these portrayals are not merely historical recollections but are shaped by cultural, political, and artistic discourses that reflect the values and ideologies of their time. The state often assumes the authority to define and preserve these representations, ensuring they align with national narratives. This dynamic can lead to tensions, particularly when alternative interpretations emerge through art and literature, challenging the static and idealized versions of heroism that often prevail.

Amid this context, the contestation between state-sanctioned narratives and artistic reinterpretations becomes increasingly relevant. As a form of creative expression, theatre often serves as a space to re-imagine historical figures, offering nuanced perspectives that humanize them while questioning dominant ideologies. The case of Imam Bonjol exemplifies this tension, where the theatrical reinterpretation of a national hero has sparked debates over the boundaries of historical fidelity and artistic freedom. Understanding these contestations is vital in addressing broader questions about who controls historical narratives, how they evolve, and their role in inspiring contemporary audiences, particularly younger generations, to redefine heroism more relatably and inclusively.

History books about heroes have further intensified the contestation between artists and the state. This context highlights the

state's power and even authority to determine who is worthy of being called a hero. For the state, a hero is undoubtedly someone who has made significant contributions to the nation and is often portrayed as flawless and morally upright. On the other hand, artists frequently present a different perspective, emphasizing heroes' flaws and human complexities. While offering a more nuanced depiction, this approach can make their artistic works seem controversial, further exposing the tension between static state narratives and dynamic artistic interpretations.

The history book "Encyclopedia of National Heroes" includes 90 national heroes, showcasing their excellence and greatness (Hadi & Sustianingsih, 2015; Said & Wulandari, 1995). This excellence serves as a guide for the younger generation in understanding the spirit of heroism. However, focusing solely on their strengths distances these heroes from their social lives. In the theatrical performance titled "Imam Bonjol" by Wisran Hadi, the hero is portrayed as an ordinary human with faults and flaws. Consequently, differing opinions arise regarding the interpretation of hero history. Opponents of the performance argue that Tuanku Imam Bonjol, as a hero, should be depicted as flawless. The West Sumatra Regional Government even sent a letter to the organizers of the Istiqlal II Festival in 1995, urging the cancellation of the "Imam Bonjol" theatrical performance. This difference in attitude has led to a contestation of views between artists and the government in defining the figure of a hero

(Setianto, 2019). Therefore, this study must examine the state's influence on historical determination, particularly state intervention in the arts, specifically theatre, during the New Order era.

The facts in the literature are related to tangible evidence surrounding 'Imam Bonjol's performance. This evidence is found in writings (newspapers) that highlight the contestation of views between artists and the government in defining the figure of a hero (Roy, 2021; Saputra & Habib, 2021; Setianto, 2019). Newspaper clippings containing brief and straightforward reviews of 'Imam Bonjol's theatrical performance are important inputs as data for this research. These data provide an overview of the differing understandings of historical symbols. This has led to a contestation between artists and the creators of history (the government) (Jaja, 2014; Novrizal et al., 2022; Puspitasari, 2012). It contrasts with what is presented in Wisran Hadi's theatrical performance of Imam Bonjol. The director attempts to offer an alternative perspective different from the long-held beliefs of society regarding historical figures (Hidayat et al., 2022; Sahrul, 2005).

The contestation between art and the state influences the purpose of this writing, which is to explain the nature of the prohibition against the 'Imam Bonjol theatrical performance, the differences in perception, and the depth of substance in history books. The government's prohibition of the 'Imam Bonjol theatrical performance was based on the belief that the performance demeaned heroism. The differing perceptions

of heroes in history compared to those in theatrical performances must be further elaborated to show that the performance is countercultural to the government's view of heroes. This performance, of course, went viral because it was opposed by many, especially the government (authorities). The next goal is to discuss the depth of substance in the history book 'Encyclopedia of National Heroes,' which contains values that artists and the government perceive differently. It will generate the idea that history is written based on interests. The research question in this writing is: What is the nature of the contestation between theatre artists and the state in representing heroic identity in history books?

The Imam Bonjol theatrical performance by Wisran Hadi has sparked significant contestations of interests and differing interpretations, reflecting varied understandings of a single artistic work. Representatives from different stakeholder groups hold their version of the truth, leading to clashes within the performance and the broader societal context. This contestation is demonstrated by the governor's prohibition of the performance, which underscores a deeper conflict between the state and the arts. The tension highlights fundamental differences in how the history of heroes is understood and extends into other critical areas, such as politics and religion. Stakeholders' perspectives on these issues shape their interpretations of the performance, resulting in complex conflicts. While some of these conflicts take visible forms, like the outright ban on the play,

others are subtler, manifesting as shifts in the understanding and reinterpretation of the nation's historical struggles.

The urgency of this study lies in its potential to uncover the broader implications of these contestations for cultural memory and the construction of national identity. In an era where historical narratives are increasingly questioned and re-imagined, understanding how artistic reinterpretations challenge or complement state narratives is vital. The Imam Bonjol performance is a critical case study to explore how differing views on heroism, politics, and religion shape collective memory and inform the ongoing dialogue between the state and cultural producers. This research sheds light on the role of art in questioning dominant ideologies and fostering a more nuanced understanding of history, which is essential for the younger generation navigating a complex and evolving cultural landscape.

LITERATURE REVIEW

Contestation of Views

The Indonesian government has a history of banning or restricting performances that are deemed politically or morally controversial. During the New Order regime, theatrical performances with political commentary were often censored (Bodden, 2007, 2010). Even after Suharto's fall, debates about morality in performances continued, as exemplified by the controversy surrounding dangdut dancer Inul Daratista in 2003. The government's approach to cultural expressions has been complex, with some

events gaining official support while others face restrictions. For instance, Chinese New Year celebrations, including spirit-medium parades, have become tourist attractions in some areas since becoming a national holiday in 2002 while facing limitations in others (Chan, 2009). This inconsistent approach to cultural performances reflects broader challenges in governance, as evidenced by the overall unsatisfactory performance of e-government services in Indonesia (Winet, 2009).

During the New Order era, theatrical arts underwent significant changes. The theatre began to be directed toward conveying political and nationalistic messages. These changes led to a contestation of views (Luger, 2019). Shin further notes that contestation refers to a situation in which two or more people hold differing views or opinions on a particular issue and actively debate to defend their respective viewpoints (Shin & Hutzler, 2018). The contestation of the views is crucial to understanding how a historical process in the context of culture (art) intersects with the needs or agendas of the ruling regime (Landau-Donnelly, 2022). Quoting Luchian (2021), public contestation and resistance, and deep political interaction between artists and audiences to promote active citizenship play an important role in developing community-based interventions. Budiyantri et al. (2022) also explain that the contestation of views can be seen based on three characteristics: related to national development discourse, cultural modernization, and the role of culture in various sectors of society.

The contestation of views (in art) occurs when the state attempts to control or restrict content, classifying some works as controversial or inconsistent with the values promoted by the state (Burke, 2019). Further contestation arises when theatre artists are seen as sources of inspiration and opinion leaders in society, facing demands to comply with state norms. Lotina (2016) explains that many artists experienced censorship and arrest because their works were seen as threatening to the regime, given the pressure to reflect communist ideology and support the government agenda. Censorship or persecution of artists threatening the government is a common issue in this context. Artists who explore themes that offend or insult certain religious beliefs may face pressure and legal actions (Hadley & Gattenhof, 2011; Hertel, 2014; Jaakkola, 2021). Thus, it can be seen that many theatre artists struggle for artistic freedom and contest with the state to defend their right to express themselves.

Artists and Government

Artistic activities have long depended on patrons or private funding and market mechanisms. This funding often comes from the government, creating a significant relationship between artists and the state. Perkasa (2020) explains that before the birth of Indonesia, artists and political activists were already working hand in hand to fight for the interests of the majority of the people. J. K. Taylor (2021) mentions that artists collaborated with political activists and also took part in combating colonialism,

imperialism, and capitalism. Besides the politically aligned artists, anti-political artist movements promoted universal humanism with the slogan 'art for art's sake.' This led to a contestation between artists and the government due to differences in views, values, and objectives in art (Orr, 2021).

Furthermore, Duester (2020) explains that the contestation between artists and the government is caused by the government restricting artists from creating works deemed controversial, provocative, or critical of the government. This includes censorship, the arrest of artists, or the banning of specific artworks. Similarly, contestation also arises when the government reduces budgets for arts and culture, making it difficult for artists to create new works (Léger, 2011; Rebellato, 2020).

Artists are considered to create works that reflect social and political issues, which become the primary source of conflict. The government feels threatened by works that criticize their policies or create social tension (Bravo, 2013). In line with Gould-Davies' (2019) writing, artists have become a strong voice opposing the government. Authoritarian governments try to suppress these voices, while in democratic systems, artists play an important role as social critics. The government's response to art that criticizes its policies can be significant. Artworks criticizing the government can quickly spread through social media, putting pressure on the government and leading them to respond to international demands concerning the artists (Ahimsa-Putra, 2015; Gray, 2019; Kumagai & Clammer,

2019). However, artists still produce new works. Dos Santos (2016) mentions that despite opposing government policies, artists believe their role is to promote positive change in society. Therefore, the government must respect freedom of expression and facilitate open dialogue with artists in this context.

Hero Identity

A hero is defined as a person who stands out due to their courage and sacrifice in defending the truth. Heroes are often considered brave because they perform actions that require extraordinary courage (Kolotaev, 2021). Their bravery, dedication, or contributions to society form the basis of their heroic identity. Beyond bravery, heroes can positively influence others, becoming a source of inspiration for their community. In line with Rodríguez (2020), the heroic identity is associated with selfless service to society. Their actions are not driven by a desire for praise or recognition but by a belief in justice and truth. Heroes exhibit high empathy toward the suffering of others, willing to feel and understand their pain, and take action to alleviate it (McKay et al., 2023; Sayer et al., 2019; Setianto, 2019).

Heroic identity is influenced by historical figures who played crucial roles in the formation of the state, such as those who fought for independence, political leaders, or social activists who played key roles in changing the nation's fate (Kerr et al., 2019). This identity is attributed to heroes who sacrificed their lives for the nation, performing heroic deeds that

resulted in outstanding achievements and contributions to the country's development and progress. Bahari (2020) mentions that national identity is often portrayed in theatre performances, films, television, and literature, depicting a hero's image. Heroes are made the central figures in artistic works and stories that help reinforce their image in society. There are three types of heroes: national heroes, independence heroes, and heroes of national awakening and revolution (Thiel & Boland, 2017). Thus, a hero's identity can vary depending on the culture, with each type of hero having their own story and achievements that significantly contribute to the nation.

THEORETICAL FRAMEWORK

The study of the contestation between theatre artists and the state in representing heroic identity within history books necessitates a nuanced understanding of hermeneutics, particularly as it applies to performance texts. Hermeneutics, as a theory of interpretation, provides a powerful lens to analyze the divergent representations and meanings ascribed to historical figures by different stakeholders, namely, the state and theatre artists (Gadamer, 1975; Ricoeur, 1984). This framework allows us to critically examine how performance interacts with and challenges the dominant narratives imposed by the state, revealing underlying tensions between political interests and artistic autonomy (Fischer-Lichte, 2008; Schechner, 1985).

At the core of this analysis is the hermeneutic circle, which underscores

the iterative process of interpretation, wherein understanding the parts of a text (or performance) is inextricably linked to the whole (Gadamer, 1975). In the context of this research, the “text” includes both the performance itself and the broader historical and political narratives within which it is situated. The state’s portrayal of heroic figures in history books often serves a political purpose, shaping collective memory to align with nationalistic or ideological goals (White, 1987). In contrast, theatre artists may reinterpret these figures to expose alternative truths, question dominant ideologies, or present counter-narratives that challenge the state’s authority (Ricoeur, 1984; Schechner, 1985).

The notion of “prejudice” and “pre-understanding,” as articulated by Hans-Georg Gadamer, is crucial for interpreting the performances of these artists (Gadamer, 1975). Each stakeholder—the state or the artists—approaches the representation of heroism with their assumptions, values, and interests. For the state, these prejudices are often aligned with maintaining a cohesive national identity, reinforcing the legitimacy of the ruling power, and ensuring the continuity of a particular historical narrative (C. Taylor, 1985). Conversely, theatre artists may enter the interpretive process with a critical stance, aiming to deconstruct state-sanctioned histories and offer alternative interpretations that resonate with contemporary social or political concerns (Fischer-Lichte, 2008; Ricoeur, 1984).

Finally, the “fusion of horizons” is an essential concept in this theoretical framework, as it illustrates the potential

for a dialogic engagement between these competing perspectives (Gadamer, 1975). Through hermeneutic interpretation, this research seeks to uncover how the performance text mediates between the artist’s and the state’s horizons, potentially leading to a synthesis that reflects a more complex and multifaceted understanding of heroic identity. This fusion, however, is not without conflict; the contestation between these horizons highlights the ongoing struggle over who gets to define history and, by extension, the collective memory of heroism (Gadamer, 1975; White, 1987).

METHOD

Material Objects

The data used in this writing consists of newspaper clippings, hero books, and the ‘Imam Bonjol theatrical performance by Wisran Hadi. The newspaper clippings document the contestation of views between artists and the government in defining the figure of a hero. The Encyclopedia of National Heroes book serves as data critiqued by the director through the theatrical performance. Wisran Hadi’s Imam Bonjol theatrical performance showcases differing perceptions of history. These three material objects are interconnected: the newspaper clippings report on the societal conditions, the hero books teach about heroic characters to the public, especially the younger generation, and the theatrical performance offers an alternative perspective, showing that heroes are also ordinary humans who are not free from mistakes.

Research Design

This research employs a qualitative design, which emphasizes the observation of phenomena and delves into the substance and meaning of these phenomena, following Creswell and Creswell's (2018) idea that the power of the words and sentences used dramatically influences the analysis and sharpness of qualitative research. The focus of qualitative research is on the process and the interpretation of the results. Qualitative research pays more attention to human elements, objects, and institutions and the relationships or interactions among these elements to understand events, behaviors, or phenomena (Fadli, 2021).

Data Source

The data sources in this research are texts from newspaper clippings that discuss the contestation of views between artists and the government in defining the figure of a hero. This condition is supported by the Imam Bonjol theatrical performance, whose text highlights the differing perceptions between the government and artists. This data is then compared with the content of hero books. The research data sources are indirectly obtained through intermediary media (newspaper clippings, performances, and history books). This data consists of evidence, notes, or historical reports compiled in archives or documentary data. The data is acquired by requesting permission to borrow the clipping evidence stored by the studio that performed the theatre, and the books used for recording national heroes.

The research employed a qualitative method, with interviews serving as the primary data collection technique. The data sources included two key actors involved in the Imam Bonjol performance and members of Bumi Theater, namely Fira Susanti (aged 53) and Yondi Fitria (aged 55), both of whom have extensive experience in theatre and significant involvement in Wisran's theatre group. Additionally, Hendra Gusfia, a 50-year-old representative from the Government Tourism Office, provided insights from a governmental and cultural policy perspective. The interviews were conducted between late November and early December, concluding around December 5. This timeframe allowed for an in-depth exploration of their perspectives, enriching the study with diverse viewpoints on the intersection of cultural performance and historical representation.

Data Collection Technique

The data collection method used in this study is documentation. It involves collecting newspaper clippings highlighting the controversy between the government and artists in understanding national hero history and the theatrical performance 'Imam Bonjol' by Wisran Hadi. Documentation study is a way for qualitative researchers to describe subjective views through written materials (newspaper clippings and history books) or documents (theatrical performances) produced directly by the people involved in the contestation.

Data Analysis

Data analysis uses triangulation, which combines various existing data and sources (Sondak, 2019). Data triangulation in analyzing the contestation of views between artists and the government in defining the figure of a hero can provide a more comprehensive understanding of the phenomenon. This involves exploring various related aspects, such as examining the presence of Wisran Hadi's 'Imam Bonjol' theatrical performance and comparing it with the national hero books, all documented in newspaper clippings as the primary data source. Through triangulation, a researcher can conduct a more in-depth analysis.

This study employs an intertextual approach to analyze the Indonesian government's ban on Wisran Hadi's 'Imam Bonjol' theatre performance. This approach involves examining the performance of other relevant texts, including historical accounts, cultural narratives, and political discourses, to uncover deeper meanings and connections. The analysis focuses on identifying the hypograms, or underlying themes, within 'Imam Bonjol,' such as nationalism, cultural identity, and political resistance, which may have contributed to its controversial nature and subsequent banning. Additionally, the study explores cohippograms, or the interplay between 'Imam Bonjol' and other banned performances or cultural works, to understand how these interactions shape public perception and governmental response. By enriching the research method with these intertextual elements, the study aims to provide a comprehensive and

nuanced understanding of the impact and implications of banning the performance.

RESULT

The data highlighting the contestation of views between artists and the government in defining the figure of a hero is derived from the following realities: (1) The reality of the government's prohibition of the Imam Bonjol theatrical performance based on the belief that the performance demeaned heroism, (2) The reality of the 'Imam Bonjol' performance as a counterculture to the government's view of a hero, and (3) The reality of the substance of the 'National Heroes' history book, which contains values perceived differently by artists and the government.

The Government's Prohibition of the 'Imam Bonjol' Theatrical Performance Based on the Belief that the Performance Demeaned Heroism

Due to the prohibition by the West Sumatra regional government, the Imam Bonjol contestation in 1995 received extensive news coverage. The performance had entered the political arena, and the governor's rejection led to massive exposure in local and national media. Table 1 shows news articles related to the prohibition of the Imam Bonjol theatrical performance.

Table 1 shows that the government banned the theatrical performance (Imam Bonjol) based on the belief that the performance demeaned heroism. Wisran Hadi's creativity in altering, defying, subverting, and challenging myths was

Table 1

Collection of news articles related to the prohibition of the 'Imam Bonjol' theatrical performance

No.	Title of the Article and Dates	Media
1.	Grounding Imam Bonjol, 22 October 1995	Singgalang Newspaper
2.	Countering Myths and Controversies of Wisran Hadi, November 12, 1995	Kompas Newspaper
3.	Imam Bonjol in TIM (Ismail Marzuki Park), 17 October 1995	Republika Newspaper
4.	Imam Bonjol Drama, October 18, 1995	Republika Newspaper
5.	The Figure of Imam Bonjol in Everyday Life, October 19, 1995	Republika Newspaper
6.	The Story of Imam Bonjol Held, October 18, 1995	Terbit Newspaper
7.	Imam Bonjol Still Performed at FI II (Istiqlal Festival), October 17, 1995	Media Indonesia Newspaper
8.	History Lessons Have Separated Figures from Their Lives, October 18, 1995	Media Indonesia Newspaper
9.	Self-Critique of West Sumatra, Agility of Aceh, October 18, 1995	Kompas Newspaper
10.	From Clippings to Bonjol, October 22, 1995	Gatra Magazine
11.	The Human Side of Imam Bonjol, October 25, 1995	Tiras Magazine
12.	We Reject Wisran Hadi's Version of the Imam Bonjol Performance, September 17, 1995	Canang Weekly
13.	The Failure of Tuanku Imam Bonjol in Wisran Hadi's Mind: An Epic Struggle Turned Upside Down, September 24, 1995	Canang Weekly
14.	Wisran Hadi's Version of the Tuanku Imam Bonjol Performance Can Distort Perceptions, October 1, 1995	Canang Weekly
15.	Two Contradictory Letters, October 8, 1995	Canang Weekly
16.	Master of Reversal, DKSB, and the Dialogue Surrounding the Imam Bonjol Script, October 15, 1995	Canang Weekly
17.	Minang Figures Regret Imam Bonjol Performance, October 22, 1995	Canang Weekly
18.	The Performance Was Revised Without an Announcement, October 29, 1995	Canang Weekly
19.	Imam Bonjol Might Be Banned, October 5, 1995	Singgalang Newspaper
20.	40 'Bumi Theater' Personnel Depart, Committee: 'Imam Bonjol' Is Not Banned, October 11, 1995	Singgalang Newspaper
21.	Governor on 'Imam Bonjol': Regional Government Does Not Suppress Creativity, October 15, 1995	Singgalang Newspaper
22.	Imam Bonjol: A Leadership Tragedy, October 17, 1995	Singgalang Newspaper
23.	From the 'Imam Bonjol' Discussion by Bumi Theater Padang: Imam Bonjol, a Symbol of Minangkabau Egalitarianism, October 18, 1995	Singgalang Newspaper
24.	There Are Doubts Among the Istiqlal Festival Committee About Staging the Tuanku Imam Bonjol Drama, October 1, 1995	Haluan Newspaper
25.	Imam Bonjol Will Still Be Performed If Approved by the Indonesian Ulema Council, October 9, 1995	Haluan Newspaper
26.	Finally, the Imam Bonjol Drama Was Also Staged in Jakarta, October 14, 1995	Haluan Newspaper

Source: Documentation of Bumi Theater West Sumatra (1995 archives)

acceptable to the public. However, he faced criticism when he applied this approach to the historical figure Tuanku Imam Bonjol, a national hero cherished by the Minangkabau community. Peto Syarif, known as Imam Bonjol, is recognized as a strong figure who fervently opposed colonialists. As a great leader (imam), Peto Syarif is also depicted as a brave and steadfast man. However, in Wisran Hadi's portrayal, Imam Bonjol appears indecisive, cowardly, and hesitant in his actions, even being mocked by other Bonjol figures. The fiction writer expressed a different perspective on the matter, in this case, the heroic history of Imam Bonjol. Wisran Hadi's version of Imam Bonjol is a natural interpretation, not intended to demean his heroism.

In Indonesia, elevating historical symbols is a way to awaken the spirit of nationalism and national identity. History



Figure 1. Wisran Hadi, the director of the theatrical performance Imam Bonjol, triggered the contestation between theatre artists and the state in representing the identity of heroes in history books

Source: Bumi Theater West Sumatra, 1995

showcases past glories, guiding society to escape the colonial experience. This is different from what is presented in Wisran Hadi's script (Figure 1). The author tries to offer an alternative to the traditional view of heroes in history held by the public. On October 13, 1995, around 150 spectators began gathering at the location of the Imam Bonjol performance at 7:30 PM. At the Closed Theater of Taman Ismail Marzuki (TIM) in Jakarta, security officers from Kodam Jaya (Regional Military Command) were already on guard for any eventuality. Ultimately, the Imam Bonjol Theatre was performed on the following nights. The theatre was full of curious people about Imam Bonjol's performance. On October 17, 1995, a discussion was held about Wisran Hadi's Imam Bonjol theatre performance. This discussion sought the director's accountability in creating the artwork.

Preparation of the Performance as a Counterculture to the Government's View of Heroes

The theatrical performance of Imam Bonjol begins with a prologue in the form of a song accompanied by music. This prologue depicts the condition of the Bonjol region before the Padri War occurred. The initial part also introduces Peto Syarif, the leader of Bonjol, who later becomes known as Tuanku Imam Bonjol. In addition to Tuanku Imam Bonjol as the primary leader, Bonjol has three other leaders: Tuanku Hitam, Tuanku Gapuak, and Tuanku Keluat. These four leaders are known as Barampek Selo Bonjol.

After the song ends, all the performers are on stage and clap as if it were the end of a ceremonial event. Then, they leave the stage, and journalists who attended the event rush to ask questions about it. The stage is empty for a moment, and then a commotion is heard, growing louder and louder.

Several men are seen running on top of the fortress. Then, two characters enter with drawn swords and are confronted by the leaders of Bonjol. A dialogue ensues about the massacre at Alahan Panjang Mosque due to the clash between the traditionalists and the Padri (religious) faction. The debate finds no resolution, so the leaders of Bonjol suggest that the two characters meet directly with Tuanku Imam Bonjol. The two characters, later known as Tuanku Bandaharo and Malin Basa, who have a spirit of jihad, successfully incite the people of Bonjol to fight against injustice. This offends the leaders of Bonjol. However, Tuanku Imam Bonjol himself cannot do anything. As a result, Tuanku Gapuak and Tuanku Keluat hand over their ceremonial swords to Tuanku Imam Bonjol, signifying their resignation from Barampek Selo Bonjol (F. Susanti & Y. Fitria, personal communication, December 1, 2024).

This issue increasingly amplified the doubts within Tuanku Imam Bonjol. Meanwhile, the two characters who arrived later grew bolder and decided to invite one of the Harimau Nan Salapan, Tuanku Nan Renceh, known for his ferocity. Amidst these doubts, a peace envoy disguised as an Arab merchant selling perfume, carpets, emeralds, diamonds, and other goods

arrived. Tuanku Imam Bonjol's wife was deceived and persuaded her husband to buy these goods. However, before the transaction could take place, Tuanku Bandaharo arrived and chased the peace envoy away, causing him to flee the stage in panic.

In the next part, the issue shifts from the war between the traditionalists and the Padri faction to a battle between the people of Bonjol and the Dutch colonizers. The traditionalists, who previously harbored a deep hatred for the Padri, began to unite in the fight against Dutch colonialism. Datuk Sati, who once killed Padri members at the Alahan Panjang Mosque, also joined the fight. The Dutch had surrounded Bonjol from all directions, causing the people of Bonjol to suffer from hunger and hold their plates up to the sky. This situation made Tuanku Imam Bonjol increasingly anxious.

In dire conditions, a letter from Colonel Elout, the Dutch Army Commander, requested the people of Bonjol to surrender. If they refused, the Dutch army would launch a massive attack. The conflict within Bonjol intensified; on one side, Tuanku Bandaharo and his followers wanted to surrender, while on the other side, Datuk Sati and his group wanted to continue fighting against the Dutch. This led to both leaders drawing their weapons. At the same time, Tuanku Imam Bonjol drew his sword to break up the fight between the two leaders. Imam Bonjol's sword was thrown to the ground, resulting in his retreating to Lubuk Sikaping. Upon his return from Lubuk Sikaping, the situation in Bonjol had changed. The people of Bonjol no longer

respected Tuanku Imam Bonjol as a leader. Tuanku Hitam and Tuanku Bandaharo had been appointed as leaders by the Dutch, while Tuanku Gapuak and Tuanku Keluat were planning a mass assassination of the Dutch. Datuk Sati also had a cunning plan to exploit the situation.

After the killings, Tuanku Keluat approached Tuanku Imam Bonjol with two swords in hand. In his right hand was the ceremonial sword of Bonjol, and in his left hand was his sword. The two significant figures of Bonjol quarreled and were about to kill each other. Fortunately, a young man intervened, stopping the fight and uniting them. Both leaders raised their weapons, signaling that the war was about to begin. Amidst the chaos of the great war, there was still a conflict between the desire to surrender and continue fighting. Even the female warriors of Bonjol showed their presence. As a result, they quarreled and fought with each other (Figure 2). For the

second time, Tuanku Imam Bonjol's sword fell. This time, the female warriors hoisted the sword on a flagpole. At the end of the story, Tuanku Imam Bonjol said, "That great name has only magnified my failure. Peto Syarif is my name; call me that. Imam Bonjol is a man who failed at the equator." After saying these final words, Tuanku Imam Bonjol disappeared behind the stage, leaving the audience stunned by his departure (F. Susanti & Y. Fitria, personal communication, December 1, 2024).

The Substance of the 'National Heroes' History Book Contains Values Perceived Differently by Artists and The Government

The history book, 'Encyclopedia of National Heroes,' was written by Julinar Said and Triana Wulandari and edited by Sri Sutjiatiningsih. The book was published by the Sub-directorate of History, Directorate of History and Traditional Values, Directorate



Figure 2. Final scene of the 'Imam Bonjol' Theatrical Performance by Wisran Hadi
Source: Bumi Theater West Sumatra, 1995

General of Culture in 1995. The book covers 90 national heroes, from Sultan Agung to Colonel Anumerta Sugiyono. Knowledge about the world, as gleaned from history books, does not exist for someone who has never seen it firsthand. Most of human knowledge is acquired through interactions with parents, friends, school, newspapers, books, conversations, speeches, and television, which are received verbally. This constitutes a second world, known to humans indirectly.

Not only does the book Encyclopedia of National Heroes portray heroes as perfect figures, but it is also used in other school textbooks. For example, the book 'History of National Heroes' was authored by F. Ramadhan and edited by the Serat Bahasa Team. This book provides a way to learn more about national heroes (H. Gusfia, personal communication, December 3, 2024). It explains the Indonesian heroes who contributed significantly to the struggle for Indonesia's independence. The history of national heroes is taught in schools, from elementary to high school levels. By reading the history books presented in this writing, we can impart knowledge to the younger generation to increase their awareness of heroes and thereby broadening their perspective and fostering a greater love for this country. The stories about the history of these heroes start from the Dutch, British, and Japanese colonial periods up to the present day (Figure 3).

The evidence that Tuanku Imam Bonjol existed and fought against Dutch colonialism is derived from textbooks.

The events described in these textbooks were not witnessed directly by the people who wrote about them but were based on other reports (H. Gusfia, personal communication, December 3, 2024). With so many intermediaries through which the events were passed, the level of distortion also increased. It depends on the conditions and appreciation of the historical actors. These conditions could have been influenced by specific interests they wanted to promote. For example, colonizers who wrote history books about Tuanku Imam Bonjol had the clear objective of maintaining their presence in the colony. They would portray the natives as always wrong and would never refer to themselves as colonizers. The

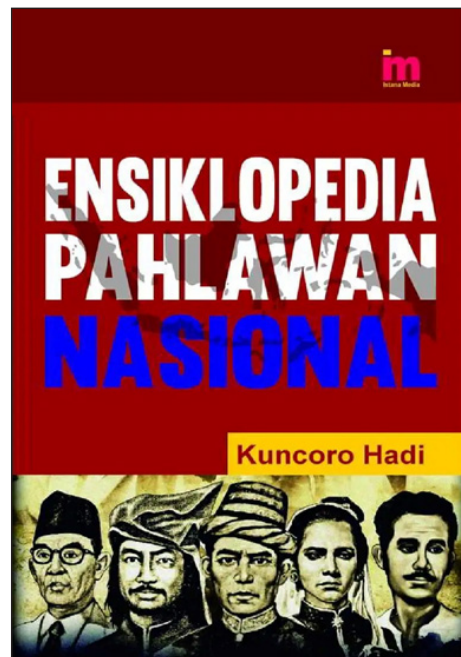


Figure 3. A history book of heroes containing the heroic narrative of national heroes, including Tuanku Imam Bonjol
Source: Hadi, 2017

history of Tuanku Imam Bonjol, written by Indonesians, is also not free from the influence of power interests.

The state's perspective in prohibiting the theatrical staging of Imam Bonjol stems from its role as the guardian of national identity and historical narratives. The government views national heroes like Imam Bonjol as symbols of unity and moral excellence, and their portrayal is often confined to idealized representations aligned with state-sanctioned historical accounts. The fictionalized elements and creative reinterpretations in the theatre performance may be perceived as undermining this idealized image, creating a risk of misrepresentation or distortion of national values. Additionally, the government likely seeks to maintain control over how historical figures are remembered and interpreted, fearing that alternative narratives could spark controversy or dilute the intended message of heroism. This rigid approach to historical representation underscores the tension between the state's desire for ideological consistency and the artists' pursuit of creative freedom to present a more complex and humanized depiction of history (H. Gusfia, personal communication, December 3, 2024).

DISCUSSION

This research provides insight into the contestation of views between artists and the government in defining the figure of a hero. The government banned the theatrical performance of 'Imam Bonjol' because it was perceived as demeaning

the figure of a national hero. Two-thirds of those who opposed the 'Imam Bonjol' performance were people employed by government institutions, while only a quarter of those who supported it were government employees. The human ability to analyze a problem is crucial. When confronted with history, Wisran Hadi offered freedom and democratized thoughts about reality (Pramayoza, 2022). From this, people realize that they are not the product of inherent personality traits but of how they are constructed within society. Although people learn a lot from history, they often become complacent (Fitri et al., 2012; Muslim, 2019; Syam, 2017). The 'Imam Bonjol' theatre depicts a new history of the Padri War.

Imam Bonjol: From Textbook Icon to Stage Persona

This clash creates a conflict between the rulers and the ruled. The ruled attempt to challenge the thoughts of the rulers, while the rulers, of course, do not remain passive and take action supported by their power (Arranz, 2020; Wallace, 2022; Winkler, 1990). The imaginative strength of Imam Bonjol's theatre is evident in its effort to liberate the work from the reality believed by society. The public was jolted when they saw Wisran Hadi's Imam Bonjol performance, which did not reflect their imagination. This work is powerful because it is supported by strong imagination. Expressing imagination based on history is indeed challenging if artists who wish to develop their imagination are bound by

historical accuracy (Arsa, 2021). Therefore, presenting historical figures and their human behaviors on the theatre stage is fine. The preparation of the performance serves as a counterculture to the government's view of heroes (Cinque & Nyberg, 2021). The way artists explore history is different from the academic approach. Wisran Hadi redefined the history of Imam Bonjol through theatre, achieving a balanced understanding of history. As a theatre artist, Wisran Hadi tried to use historical objects to activate his imagination (Murdowo, 2015; Rinjani, 2020; Sugiarti, 2017).

Positioning the figure of Imam Bonjol as different from the Imam Bonjol in history textbooks makes the character more imaginative. Imam Bonjol merely adopts the historical symbol of the struggle for power to reflect on the current condition of Indonesian society. The function of the Imam Bonjol Theatre is to re-imagine historical issues to reveal today's realities. Such imagination is creative (Belvage, 2015; Damayanti & Engliana, 2022; Ibrahim, 2006). The events in the Imam Bonjol theatre are tied to a specific situation, namely the Padri War that occurred in West Sumatra in 1830, which was triggered by civil war. The effort to see the human side of Tuanku Imam Bonjol is a rebuttal to the existence of history that only highlights valor. The connection between the Padri War and the Imam Bonjol theatre reflects historical truth.

The substance of the 'National Heroes' history book contains values that artists and the government perceive differently. History has specific interests when it is

written. Fundamental aspects are left out or intentionally omitted because they conflict with those interests. Therefore, history does not possess absolute truth—the long interval between the events and the writing further compounds this. The history of Imam Bonjol occurred in 1830, while the history referred to today was written in 1995 (Khusniawati et al., 2021; Murdowo, 2015; Muslim, 2019). Even if there are Dutch books that include writings about Imam Bonjol written during their colonization of Indonesia, they cannot be considered to contain the whole truth, as the colonizers had their interests regarding the colony (Arsa, 2021).

The world's reality in history books reflects what is understood in everyday life. In other words, historical reality is constructed by those behind the history books. From history, perceptions about reality, the world, or facts may unconsciously be built (Sullivan et al., 2008). History has played a role in constructing or even fabricating its narrative. The world feels full of crises, as much of history depicts a face of crisis. Even though this crisis may have existed for a long time, history books can make it seem more dramatic (Asari, 2018; Clare & Hallewas, 2023; Hassanzadeh et al., 2023). History is influenced by power and exploits textual reality. The past becomes a historical commodity that politically benefits the ruling power or hegemony. History is shaped by an ideological touch that constructs the meaning of events to serve the interests of the ruling hegemony.

Intertextuality and the Contestation of Heroic Identity

The contestation between theatre artists and the state in representing heroic identity in history books emerges as a negotiation of narrative authority, where intertextuality plays a critical role in shaping the discourse. By examining the Imam Bonjol performance through the lens of intertextuality, hypograms, and cohypograms, it becomes evident that the artists' creative interpretation and the state's ideological framework are grounded in distinct textual references and cultural narratives. Theatre artists utilize fictionality not merely as a tool for dramatization but as a means of critiquing and re-imagining the official historical narrative, challenging its rigidity and exclusivity.

From an intertextual perspective, the Imam Bonjol performance draws on several hypograms, including historical documents, oral traditions, and religious teachings, which serve as foundational sources for constructing heroic identity. These hypograms are often reinterpreted in the performance, blending factual historical accounts with fictionalized elements to humanize Imam Bonjol and highlight his moral and spiritual struggle against colonial forces. For example, imagined dialogues and dramatized moments introduce narrative flexibility that contests the state's portrayal of Imam Bonjol as a static, one-dimensional figure in official history books. This intertextual dialogue between historical and fictional elements underscores the dynamic process of constructing a heroic identity.

The use of cohypograms, or the broader cultural and political narratives that coexist with the performance, further amplifies this contestation. These narratives include discourses on nationalism, religious resistance, and post-colonial identity, which provide a complex framework within which the Imam Bonjol performance operates. By juxtaposing Imam Bonjol's fictionalized personal struggles with his historical role as a resistance leader, the performance reveals the tensions between the state's utilitarian depiction of heroes and the more nuanced, multifaceted identities that emerge from cultural and artistic reinterpretation. This layered approach allows the audience to engage with history critically, questioning the power structures that dictate how heroes are remembered and celebrated.

Through this intertextual strategy, Wisran Hadi's work challenges the hegemonic state narrative, offering a space for alternative interpretations that acknowledge the fluidity of history and the multiplicity of truths. The interplay between hypograms and cohypograms highlights the capacity of theatre to reinterpret historical figures in a way that resonates with contemporary audiences. By doing so, the performance critiques the state's monopoly over historical discourse and redefines the heroic identity as dynamic, human, and relevant to ongoing struggles for justice and freedom. This reimagining invites a deeper reflection on the societal and political forces that shape historical narratives, fostering a dialogue that bridges the past and the present.

Negotiating Authority: Theatre as a Site of Historical Discourse

Cohypograms, on the other hand, represent the broader cultural and political narratives that coexist with the performance. These include other theatrical works addressing colonial resistance, contemporary debates about nationalism, and media discourses surrounding cultural heritage. The Imam Bonjol performance situates within these cohypograms, contributing to and drawing from their themes and ideological tensions. For instance, while the state may emphasize Imam Bonjol's role as a national hero to promote unity, theatre artists may foreground his personal sacrifices and moral dilemmas to critique modern political power structures. The friction between these cohypograms reflects the contested nature of historical memory and the competing interests in shaping national identity.

This tension highlights how cultural production becomes a site of negotiation between state authority and artistic expression. Cohypograms offer a lens to explore how narratives in different mediums—literature, media, and theatre—interact to create a layered understanding of history. For example, while state narratives often sanitize history to maintain a cohesive identity, theatre can expose those accounts' contradictions and moral ambiguities. The Imam Bonjol performance leverages these broader cultural narratives to reframe the hero not as a monolithic figure but as someone shaped by complex social, political, and personal struggles, thereby challenging the state's ideological rigidity.

Moreover, this dynamic interplay reveals the power of fictionality in theatre to question established truths and provoke critical engagement with historical narratives. By intertwining hypograms (specific historical texts) with cohypograms (cultural and political themes), the Imam Bonjol performance enables audiences to reconsider the constructed nature of heroism. The performance critiques the hero as a symbol and invites reflection on the processes through which historical figures are immortalized and simplified. In doing so, it opens a space for marginalized or alternative perspectives to emerge, enriching the discourse on national identity.

Ultimately, the Imam Bonjol performance illustrates how theatre can serve as a counter-narrative to state hegemony, fostering a more nuanced understanding of cultural memory. By challenging the state's monopoly over historical representation, the performance asserts the role of the arts in democratizing history and questioning power structures. This dialogical engagement between state-sanctioned history and artistic reinterpretation underscores the importance of preserving creative freedom in shaping a more inclusive and multifaceted national identity. It invites ongoing dialogue about how history is remembered, whose voices are amplified, and how cultural memory evolves.

CONCLUSION

The analysis of Wisran Hadi's theatrical performance of Imam Bonjol reveals a significant gap in portraying national

heroes within history books, such as the *Encyclopedia of National Heroes*. While these books emphasize historical figures' heroic values and struggles, they often neglect the human aspects that render these figures relatable and multifaceted. The performance of Imam Bonjol serves as a counterculture, challenging the state's idealized representations by highlighting the imperfections and human vulnerabilities of the hero, thereby offering a more grounded and realistic portrayal.

Theoretical Implication

This study extends existing theories on cultural memory and narrative identity by demonstrating how theatre functions as a critical space for historical reinterpretation. Drawing from Ricoeur's (1984) theory of narrative identity, this research illustrates how theatrical representations construct and reconstruct historical figures in response to contemporary sociopolitical conditions. Ricoeur's argument that identity is shaped through narratives aligns with the contestation between state-controlled history books and artistic reinterpretations of heroism (Ezzy, 1998; Ricoeur, 1984).

Furthermore, this research builds upon White's (1987) historiographical theory, which posits that historical narratives are constructed through rhetorical strategies rather than objective truth (Canning et al., 2010). The theatrical performance of Imam Bonjol exemplifies this by reconfiguring established historical accounts, thereby exposing the inherent subjectivity of historical representation (Ezzy, 1998; La

Greca, 2023). This finding supports the notion that history is not a fixed account, but a dynamic discourse shaped by competing ideologies.

Additionally, Schechner's (1985) performance theory provides a valuable framework for understanding how the embodied nature of theatrical performances challenges dominant historical discourses. The physical enactment of Imam Bonjol disrupts the textual authority of history books, positioning theatre as a medium that fosters alternative engagements with the past (Scorese, 2021). This aligns with Fischer-Lichte's (2008) concept of performative transformation, which highlights the ability of theatre to reshape audience perceptions of historical figures (Fischer-Lichte, 2008; Scorese, 2021).

The integration of these theoretical perspectives reinforces the idea that theatre operates as a space of ideological resistance, challenging the hegemony of state-controlled narratives. By questioning the authenticity and objectivity of historical accounts, theatre enables alternative interpretations of heroism that better reflect the complexities of human identity and struggle (Eva et al., 2023). This study underscores the importance of viewing history as an evolving discourse shaped by ongoing social and political negotiations.

Ultimately, this research highlights the necessity for historical discourse to incorporate multiple perspectives, fostering a more inclusive representation of national heroes. The dynamic interplay between performance and history demonstrates

that memory is not passively received but actively reconstructed through cultural expression. Recognizing the performative nature of historical reinterpretation opens pathways for a more nuanced and critical engagement with the past, ensuring that diverse voices are acknowledged and represented. Drawing from Ricoeur's (1984) theory of narrative identity, this research illustrates how theatrical representations construct and reconstruct historical figures in response to contemporary sociopolitical conditions. Ricoeur's argument that identity is shaped through narratives aligns with the contestation between state-controlled history books and artistic reinterpretations of heroism (Ezzy, 1998; McMahon, 2008).

Implications for Theory and Practice

Theoretically, this study contributes to discussions on cultural memory, performativity, and historiography. It emphasizes how cultural memory is shaped through performative acts, demonstrating theatre's role in constructing and challenging dominant historical narratives. By positioning theatre as a dynamic tool for reinterpreting history, this study underscores its capacity to reshape collective memory and identity through artistic expression.

This study highlights the importance of integrating artistic perspectives into history education for practical applications, particularly in education and cultural policy. By doing so, educators can encourage students to critically engage with history, recognizing it as a contested and evolving discourse rather than a static record of the

past. This approach fosters critical thinking and a deeper understanding of how narratives are shaped and reshaped over time.

Additionally, cultural policymakers should recognize the role of artistic expressions in shaping national identity. Ensuring that diverse perspectives are acknowledged and preserved in cultural and educational frameworks can promote inclusivity and a more representative historical consciousness. By valuing theatre and other artistic forms as legitimate means of historical interpretation, this study calls for policies that support creative engagements with history, ultimately contributing to a more nuanced and multifaceted understanding of the past.

Limitations and Recommendations

One limitation of this study is its focus on a single theatrical performance—Wisran Hadi's *Imam Bonjol*—as a case study. While this performance is emblematic of broader trends in the contestation between state narratives and artistic expression, future research could benefit from a comparative analysis of multiple theatrical works addressing historical figures in different sociopolitical contexts. Further studies could also explore the reception of these performances among audiences and their influence on historical consciousness.

In conclusion, this research underscores the need for history books to present heroes not as flawless icons but as complex individuals shaped by their social realities. By doing so, future editions of history books can bridge the gap between state-

sanctioned narratives and the diverse perspectives offered by the arts, ultimately fostering a more prosperous and inclusive understanding of national history.

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to BUMI Theater Padang, Institut Seni Indonesia (ISI) Padang Panjang, and Metamedia University Padang for their invaluable support and collaboration throughout the course of this research. Their contributions, insights, and encouragement have greatly enriched the development of this paper.

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