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A systematic review of self-confidence in adolescents

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Abstract

Self-confidence is linked to several positive aspects of individual behavior, such as enhanced well-being, motivation, personal abilities, stress coping mechanisms, and mental health. Despite its recognized importance, there is a lack of comprehensive understanding regarding its various dimensions across diverse research contexts. This study aims to address this gap by systematically reviewing the literature on self-confidence published over the last decade. A thorough search was conducted using the Publish or Perish tool, which facilitates the extraction of articles from multiple databases, including Scopus. Following a detailed analysis of relevant studies, various foundational theories, research methodologies, and subject areas were identified. Additionally, articles were classified and visualized through the VosViewer application, which helped highlight key references and trends. The findings suggest a need for further exploration in specific areas of self-confidence, emphasizing the development of future research agendas. This study contributes to the existing body of knowledge by offering insights into the evolving understanding of self-confidence and identifying promising directions for future inquiry.

Keywords: Adolescents; mental health; motivation; self-confidence; stress coping; well-being.

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1. INTRODUCTION

Adolescence represents a critical phase of identity exploration, particularly in the educational context, where optimal performance is often sought. To achieve superior educational outcomes, self-confidence plays a crucial role in fostering positive and meaningful results (Jakobsson, 2006). As an essential competency, self-confidence is incorporated into the profile of Pancasila students, as endorsed by the Government of the Republic of Indonesia. A key component of this profile is independence, which requires significant self-confidence. Additionally, critical thinking is another element tied to self-confidence, as students must possess the conviction to express their thoughts through well-founded arguments without doubting their beliefs (Egan, 2019). Low self-confidence undermines students' ability to maintain a strong mindset, as insecurity leads to uncertainty in personal beliefs. Consequently, self-confidence emerges as a strategic focus for enhancing student quality in anticipation of the 2045 Golden Generation.

Akbari and Sahibzada (2020) argue that self-confidence is innate but subject to change over time. Factors such as anxiety, insecurity, fear, and societal detachment can diminish students' self-confidence. According to Bénabou and Tirole (2002), self-confidence serves as a motivational driver, capable of inducing behavioral changes. Students need to develop self-assurance in their ability to succeed in various academic activities, both inside and outside the classroom. The ability to present oneself effectively and demonstrate broad knowledge correlates directly with academic and career success (Akbari & Sahibzada, 2020). Students lacking these abilities may encounter challenges in achieving their academic goals. Insufficient self-confidence in students can impede the implementation of an effective curriculum and contribute to widespread issues within the education system. Current educational crises often stem from low self-confidence, which diminishes student participation (Akbari & Sahibzada, 2020). Norman and Hyland (2003) identify self-confidence as a crucial factor in learning, influencing both participation and academic progress. Students must possess self-confidence to take risks and engage fully in educational activities.

Self-confidence is defined as the belief in one's ability to succeed in specific tasks (Kanza, 2015). Previous studies have highlighted the positive effects of self-confidence, including improved well-being, motivation, individual performance, stress management, and mental health (Clément et al., 1994; Kukulu et al., 2013; Pettersson, 2018; Karabacak-Çelik & Aşantuğrul, 2024). Individuals with self-confidence are assured of their skills, set personal goals, and strive to attain them without undue concern for the outcomes (Kanza, 2015). Attaining quality education for students is a gradual process, and the COVID-19 pandemic has had a detrimental effect on adolescent academic confidence. Findings from the Prince's Trust (2021) indicate that approximately 52% of students in the United Kingdom reported a decline in confidence due to the pandemic. In Indonesia, the pandemic has similarly impacted students' confidence in mastering complex subjects that are challenging to study independently, such as mathematics (Nufus & Duskri, 2018), languages (Salim, 2015), and sports (Synthiawati & Ma'arif, 2021). This decline in confidence adversely affects academic performance, potentially lowering student achievement if not addressed (Moneva & Tribunalo, 2020).

Low self-confidence can severely hinder students' learning abilities, leading to psychological setbacks such as feelings of insecurity (Gottlieb et al., 2022), fear and anxiety (Akbari & Sahibzada, 2020), and social isolation (Widjaya, 2018). These barriers disrupt the learning process, as self-confidence is closely linked to active participation, a critical factor in students' academic success. Insufficient self-confidence can result in diminished motivation and negative attitudes toward learning, making it difficult for students to achieve their desired academic outcomes (Palavan, 2020). Consequently, the persistence of low self-confidence may prevent students from reaching their full potential.

Efforts to enhance self-confidence have been explored in various research innovations. In Indonesia, self-confidence development is pursued through methods such as guidance and counseling (Suhardita, 2011), symbolic techniques (Sulistyaningsih, 2018), and discussion techniques (Alzachbana, 2013), among others. These diverse approaches underscore the significance of self-confidence in personal development. Several studies have been

published regarding self-confidence in psychology and education, particularly in Scopus-indexed journals, providing a comprehensive view of the existing research landscape and identifying areas for further exploration (Abu Omar et al., 2024; Filippello et al., 2019; Martínez-Casanova et al., 2024; Permatasari et al., 2024; Wulan & Arif, 2021).

1.1. Purpose of study

This study aims to address this gap by conducting a systematic review of literature on self-confidence published over the last decade.

2. METHOD AND MATERIALS

The articles analyzed in this study were sourced from the Scopus database. A literature search was conducted for publications spanning from 2012 to 2022, covering a decade of research. The search criteria included specific journals, conference proceedings, title keywords, and publication years. The initial search identified 200 articles related to self-confidence. Articles indexed in the Scopus database were then filtered, excluding newspapers, books, book references, and book chapters.

2.1. Procedure

A systematic and explicit approach was employed in the literature review process (Garza-Reyes, 2015), complemented by mind-mapping techniques to delineate the boundaries of the knowledge base (Tranfield et al., 2003). The following outlines the five stages involved in conducting systematic literature research (Figure 1).

Figure 1

Adolescent survival safety skill determination search keywords



In November 2022, keywords for literature searches were established, with the term "confidence" selected. Scopus was chosen as the primary data source due to its extensive global publication coverage (Echchakoui, 2020) and its status as one of the most comprehensive databases of peer-reviewed journals (Effendi et al., 2021). Additionally, the Publish or Perish (PoP) application was utilized, as it has proven effective for retrieving articles from multiple sources, including Scopus (Baneyx, 2008). The initial search involved the use of the "confidence" keyword within the PoP application.

2.1.1. Initial search outcomes

The initial search was restricted to journal articles and title words from the years 2012 to 2022. A total of 200 articles were identified in this search. The results were compiled into a Research Information Systems (RIS) format, ensuring the inclusion of essential details such as article titles, author names and affiliations, abstracts, keywords, and references.

2.1.2. Refinement of search outcomes

The dataset was refined by filtering for articles indexed in Scopus. Publications such as proceedings, newspapers, books, book reviews, and book chapters were excluded, focusing only on journal articles, specifically those published in educational journals. The refined data was saved as an RIS file for further processing. The RIS data was subsequently imported into the VOSviewer bibliographic software, facilitating further data analysis.

2.1.3. Compilation of preliminary data statistics

The collected data was stored in RIS format. At the outset, the completeness of each journal article's components (year of publication, volume, issue, and pages) was verified. Any missing information was supplemented. A data analysis was conducted to categorize the articles by publication year, source, and publisher.

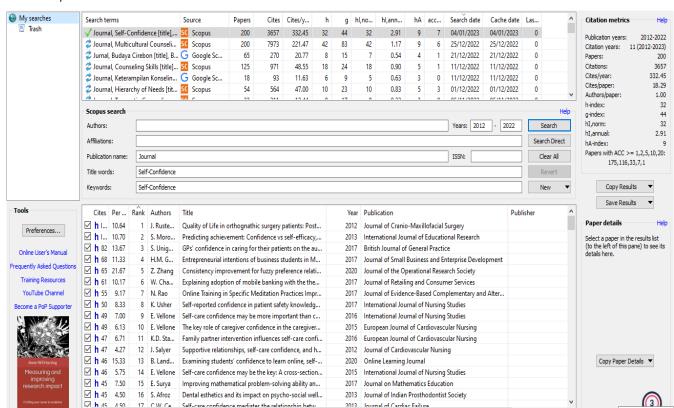
2.2. Data analysis

A systematic literature review was conducted using the PoP software (Baneyx, 2008; Parmar et al., 2019). To analyze and visualize the bibliometric network, VOSviewer software was employed (Martínez-López et al., 2020; Shukla et al., 2020). Articles were downloaded in CSV format for processing with VOSviewer, enabling the visualization and analysis of bibliometric trends. VOSviewer allows for the creation of publication, country, and journal maps based on co-citation networks, as well as keyword maps based on shared networks and maps with multiple items (van Eck & Waltman, 2009). The number of keywords included can be adjusted, with irrelevant keywords being excluded. Data mining, mapping, and grouping of articles retrieved from the database are facilitated by VOSviewer software.

3. RESULTS

The literature search conducted using the Publish or Perish (PoP) application yielded 200 articles indexed in Scopus, all published between 2012 and 2022, focusing on the topic of self-confidence. The subsequent sections provide a detailed account of the search results (Figure 2).

Figure 2
Publish or perish result



Various literature searches from 2012 to 2022 show a trend of an increasing the number of publications every year. Even though in 2022, only one article was recorded as indexed by Scopus. In 2017, the most published literature on self-confidence was 29 articles (14.5%). The results of a literature search through the PoP application each year can be seen in Table 1.

Table 1Publishing self-confidence articles every year

Publication Year	Number of Articles	Percentage
2012	13	6,5%
2013	19	9,5%
2014	20	10,0%
2015	18	9,0%
2016	21	10,5%
2017	29	14,5%
2018	19	9,5%
2019	26	13,0%
2020	21	10,5%
2021	13	6,5%
2022	1	0,5%
Total	200	100%

In the subsequent stage, following the retrieval of Scopus-indexed articles, a filtering process was applied to select only those published in educational journals or those with a specific focus on education. As a result, 33 articles published between 2012 and 2022 were identified in educational journals. The outcomes of the article screening process are presented in Table 2.

 Table 2

 Publication of self-confidence articles in education journals

No	Cite	Author	Title	Year Published	Journal
1	107	Morony et al.,	Predicting achievement: Confidence vs self- efficacy, anxiety, and self-concept in Confucian and European countries	2013	International Journal of Educational Research
2	45	Surya & Putri	Improving mathematical problem-solving ability and self-confidence of high school students through a contextual learning model	2017	Journal on Mathematics Education
3	43	Pooler et al.,	Cooking Matters for Adults Improves Food Resource Management Skills and Self- Confidence Among Low-Income Participants	2017	Journal of Nutrition Education and Behavior
4	43	White	Development and validation of a tool to measure self-confidence and anxiety in nursing students during clinical decision making	2014	Journal of Nursing Education
5	42	Praetorius et al.,	Judgment confidence and judgment accuracy of teachers in judging self-concepts of students	2013	Journal of Educational Research
6	38	Garaika	Self-efficacy, self-personality, and self- confidence on entrepreneurial intention: Study on young enterprises	2019	Journal of Entrepreneurship Education
7	38	Francis et al.,	Attainment Grouping as self-fulfilling prophesy? A mixed methods exploration of self-confidence and set level among Year 7 students	2017	International Journal of Educational Research
8	24	Hendriana et al.,	The role of problem-based learning is to improve students' mathematical problem-solving ability and self-confidence	2018	Journal on Mathematics Education
9	19	Francis et al.,	The impact of tracking by attainment on pupil self-confidence over time: demonstrating the accumulative impact of self-fulfilling prophecy	2020	British Journal of Sociology of Education

No	Cite	Author	Title	Year Published	Journal
10	18	Psycharis & Kotzampasaki	The impact of a STEM inquiry game learning scenario on computational thinking and computer self-confidence	2019	Eurasia Journal of Mathematics, Science and Technology Education
11	18	de la Fuente	Personal self-regulation and regulatory teaching to predict performance and academic confidence: New evidence for the DEDEPRO Model TM	2014	Electronic Journal of Research in Educational Psychology
12	14	Berger et al.,	Pre-service and in-service teachers' knowledge, attitudes, and confidence toward self-injury among pupils	2015	Journal of Education for Teaching
13	13	Ampountolas et al.,	Active Learning to Improve Self-Confidence and Decision-Making Skills Through the Use of Hotel Simulation	2019	Journal of Hospitality and Tourism Education
14	12	Maxwell et al.,	Impact of the Birkman method assessment on pharmacy student self-confidence, self-perceptions, and self-awareness	2016	American Journal of Pharmaceutical Education
15	12	Frame et al.,	Student perceptions of and confidence in self- care course concepts using team-based learning	2016	American Journal of Pharmaceutical Education
16	10	Rajan et al.,	Final year dental students' self-assessed confidence in general dentistry	2020	European Journal of Dental Education
17	10	Jaaffar et al.,	The psychological impact of work-integrated learning programmes in Malaysia: The moderating role of self-esteem on relation between self-efficacy and self-confidence	2019	International Journal of Educational Psychology
18	7	Siekanska & Wojtowicz	Impulsive athlete as a self-regulated learner. Can self-confidence and a positive social attitude change a developmental inhibitor into a growth catalyst?	2020	Journal of Physical Education and Sport
19	7	Spencer et al.,	Exploring Top Hat's Impact on Undergraduate Students' Belongingness, Engagement, and Self-Confidence: A Mixed Methods Study	2020	Journal of Research on Technology in Education
20	7	Hirshfield & Chachra	Experience is not mastery: Unexpected interactions between project task choice and measures of academic confidence and self-efficacy in first-year engineering students	2019	International Journal of Engineering Education
21	7	Fasanghari et al.,	Effect of maternal role training program based on Mercer theory on maternal self-confidence of primiparous women with unplanned pregnancy	2019	Journal of Education and Health Promotion
22	7	Sonbol et al.,	Undergraduate experience and self-assessed confidence in paediatric dentistry at the University of Jordan Dental School	2017	European Journal of Dental Education
23	7	Wu et al.,	Comparing integrated and disciplinary clinical training patterns for dental interns: Advantages, disadvantages, and effect on students' self-confidence	2016	Journal of Dental Education
24	7	McMahan	Fostering dental student self-assessment of knowledge by confidence scoring of multiple-choice examinations	2014	Journal of Dental Education

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No	Cite	Author	Title	Year Published	Journal
25	6	Otache et al.,	Entrepreneurial self-confidence, perceived desirability and feasibility of hospitality business, and entrepreneurial intentions of hospitality management technology students	2021	International Journal of Management Education
26	6	Mano et al.,	The Relation of Satisfaction, Self-Confidence and Emotion in a Simulated Environment	2019	International Journal of Nursing Education Scholarship
27	6	Park et al.,	Relations between technology, parent education, self-confidence, and academic aspiration of Hispanic immigrant students	2012	Journal of Educational Computing Research
28	5	Hedge et al.,	Exploring the effects of participation in a shelter medicine externship on student knowledge and self-confidence	2019	Journal of Veterinary Medical Education
29	4	Fachrezzy et al.,	Kicking ability for the eolgol yoep chagi taekwondo poomsae in terms of quality of physical condition, self-confidence, and comparison of leg muscle explosive power and core stability	2021	Journal of Physical Education and Sport
30	4	Lewis et al.,	Engineering science education: the impact of a paired peer approach on subject knowledge, confidence, and self-efficacy levels of student teachers	2021	International Journal of Science Education
31	4	Zou	How Do Patient-Centered Communication, Emotional Well-Being, Confidence in Health Information-Seeking, and Future Time Perspective Influence Health Self-Efficacy?	2021	American Journal of Health Education
32	4	Astalini et al.,	Attitude and Self-confidence Students in Learning Natural Sciences: Rural and Urban Junior High School	2020	Universal Journal of Educational Research
33	4	Sampaio- Fernandes et al.,	Students' self-confidence and perceived quality of prosthodontics education: A study in the Faculty of Dental Medicine of the University of Porto	2020	European Journal of Dental Education

Table 2 illustrates that the 33 articles on self-confidence, published in educational journals, span a variety of Scopus-indexed international journals. The most frequently cited article, with 107 citations, is "Predicting achievement: Confidence vs. self-efficacy, anxiety and self-concept in Confucian and European countries," authored by Suzanne Moronya et al. and published in the International Journal of Educational Research in 2013. This article explores the structure and cross-cultural differences in mathematical self-confidence in relation to mathematical achievement across two regions: the Confucian societies of Asia (Singapore, South Korea, Hong Kong, and Taiwan) and Europe (Denmark, Netherlands, Finland, Serbia, and Latvia).

Furthermore, among the various journals publishing articles on self-confidence, six journals have published more than one article on the topic. The International Journal of Educational Research leads in citations, with a total of 145 citations for its articles related to self-confidence. A summary of these six journals is provided in Table 3.

Table 3Journals that have articles relevant to the topic of self-confidence

Lestari, T. (2025). A systematic review of self-confidence in adolescents. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 15(2), 105-120. https://doi.org/10.18844/gjgc.v15i2.9840

No	Journal	Total Article	Cites
1	European Journal of Dental Education	3	21
2	American Journal of Pharmaceutical Education	2	24
3	International Journal of Educational Research	2	145
4	Journal of Dental Education	2	14
5	Journal of Physical Education and Sport	2	11
6	Journal on Mathematics Education	2	69
7	Others (each journal)	1	314

The visualization of the data network on Scopus data related to the keyword self-confidence, which has been refined in the search, can be seen in Figure 3. The overlay visualization can be seen in Figure 4, and the density visualization in Figure 5.

Figure 3 *Network visualization on the Scopus database*

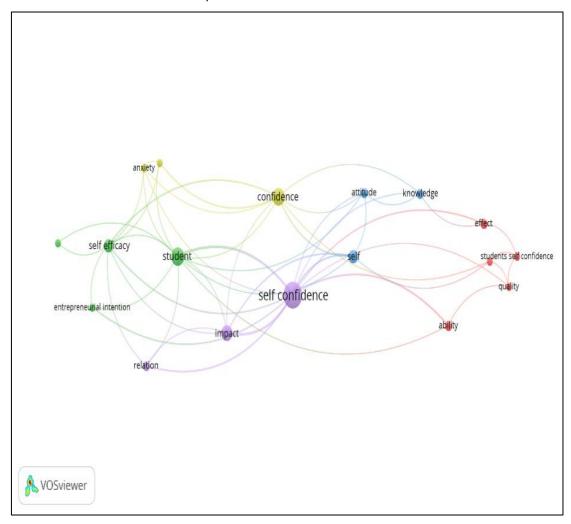


Figure 4 *Overlays visualization on the Scopus database*

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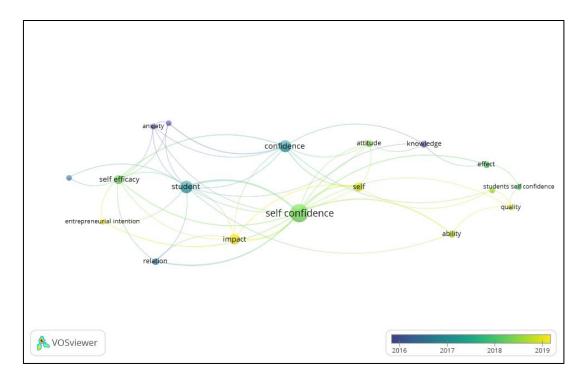
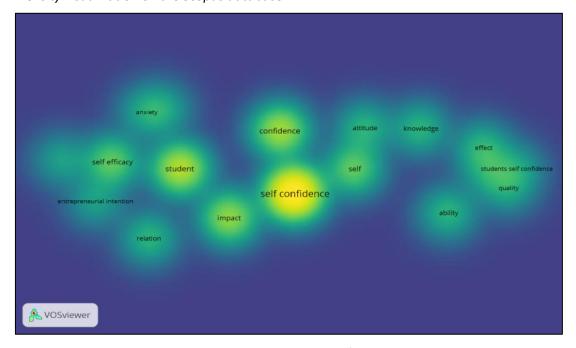


Figure 5Density visualization on the Scopus database



The results in Figures 3, 4, and 5 have been extracted from the title with a total calculation of at least two publications. Eighteen articles met the criteria of the 150 articles obtained. Based on the results of the analysis, five groups (clusters) were recorded, which represented the title of the article, as shown in Table 4.

Table 4 *Title representing each cluster*

Lestari, T. (2025). A systematic review of self-confidence in adolescents. *Global Journal of Guidance and Counseling in Schools: Current Perspectives*, 15(2), 105-120. https://doi.org/10.18844/gigc.v15i2.9840

No	Cluster	Element	
1	The First Cluster (red)	ability; effect; quality; students' self-confidence; university	
2	The Second Cluster (green)	academic confidence; entrepreneurial intention; self-efficacy; student	
3	The Third Cluster (blue)	attitude; knowledge; self	
4	The Fourth Cluster (yellow)	anxiety, confidence; self-concept	
5	The Fifth Cluster (purple)	impact; relation; self confidence	

Overlay visualization and density visualization analysis are used to identify titles in each study or scope of knowledge. Analysis was performed with the help of Vos Viewer software. It can be identified that each cluster is connected to other titles. This indicates that the development of research on this matter is related.

4. DISCUSSION

The development of self-confidence during adolescence represents a critical aspect influencing social engagement, academic achievement, and overall psychological health. Extensive scholarly work has examined this construct, identifying various determinants such as environmental context, parenting approaches, and inherent personality characteristics.

Empirical evidence has demonstrated that positive reinforcement from educators and caregivers contributes significantly to elevated self-confidence among adolescents. Additionally, individuals exhibiting favorable self-perceptions and heightened self-esteem consistently report increased levels of self-confidence.

A range of evidence-based strategies has proven effective in fostering self-confidence among adolescents. These strategies emphasize the importance of goal-setting, recognition and enhancement of personal strengths, participation in roles requiring responsibility and leadership, acquisition of coping mechanisms to navigate stress and adversity, and the cultivation of problem-solving competencies. Furthermore, the presence of supportive and constructive interpersonal relationships with both adults and peers is strongly associated with enhanced self-confidence. Opportunities for experiential learning, risk-taking, and the ability to derive lessons from failure also serve as pivotal components in this developmental process.

The present study conducts a systematic analysis of scholarly articles thematically centered on the concept of self-confidence. Sources were retrieved from the Scopus database utilizing PoP software, resulting in the selection of 33 relevant articles from an initial pool exceeding 200 publications dated between 2012 and 2022. To ensure analytical clarity, selected articles were categorized based on authorship, publication year, journal source, and citation metrics. Findings reveal a predominance of contributions from European and Asian Confucianist scholars, highlighting an imbalance in geographic representation within the existing literature. This disparity underscores the need for expanded research initiatives and collaboration across regions, particularly involving scholars from Asia and other developing areas. A longitudinal trend analysis indicates a steady growth in academic interest related to self-confidence, confirming the continued relevance and necessity of further exploration in this domain.

5. CONCLUSION

The development of self-confidence during adolescence represents a critical factor influencing social interactions, academic outcomes, and psychological well-being. A substantial body of scholarly literature has explored this construct, identifying multiple determinants, including environmental influences, parenting practices, and inherent personality characteristics. Empirical studies have demonstrated that adolescents who receive consistent positive reinforcement from educators and caregivers tend to report higher levels of self-confidence. Furthermore, individuals who maintain favorable self-perceptions and elevated self-esteem exhibit greater levels of confidence in various social and academic settings.

This study examines a range of scholarly literature concerning adolescent self-confidence across diverse global contexts. The distribution of relevant literature was identified and systematically analyzed using the Publish or Perish (PoP) software in conjunction with the Scopus database. Existing research on self-confidence demonstrates its relevance and applicability across multiple academic disciplines, including education, medicine, and management, thereby underscoring its interdisciplinary significance. Current findings indicate that research activity remains largely concentrated in European nations and regions influenced by Confucian cultural traditions in Asia. This geographical concentration reveals a critical opportunity for scholars in developing countries to contribute to the discourse by examining the socio-cultural dimensions of self-confidence within their respective populations. Expanding the geographical scope of future studies can enrich the global understanding of adolescent self-confidence and offer a more inclusive representation of developmental experiences across varying cultural and societal frameworks. Moreover, such diversification in research locales may lead to the emergence of new theoretical insights and context-specific interventions, thereby advancing both the academic field and practical applications of self-confidence development in adolescence.

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Conflict of Interest: The authors declare no conflict of interest.

Ethical Approval: The study adheres to the ethical guidelines for conducting research.

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