The development of a smart teacher book for preventing stereotypical behavior and suspicion in early childhood education

Mubiar Agustin¹*, Henry Djoehaeni¹, Nike Kamarubiani¹, Asep Deni Gustiana¹, Yoga Adi Pratama²
¹Universitas Pendidikan, Indonesia; mubiar@upi.edu (M.A.), henyjoe@upi.edu (H.D.), nike.kamarubiani@upi.edu (N.K.), asden@upi.edu (A.D.G.).
²SDN Harapan 1 Kota Cimahi, Indonesia; yoga.adipratama@upi.edu (Y.A.P.).

**Abstract:** This research develops and assesses the effectiveness of the Smart Teacher Book in preventing stereotypical behavior and suspicion in early childhood education. Employing a mixed-method approach, it combines qualitative descriptive analysis by experts, practitioners, and book users with a quantitative assessment through quasi-experimentation to evaluate the book's effectiveness while being integrated into children's learning activities. Twenty early childhood education teachers participated and were evenly divided into experimental and control groups. The instruments consist of three scales: appropriate, less appropriate, and not appropriate. The book comprises two main sections. The first section is tailored for teachers, covering stereotypical behavior and suspicion and their causes, dangers, and prevention strategies. The second section is designed for children, presenting illustrated material addressing various stereotypes and suspicions related to social categories such as race, gender, religion, and politics. Meanwhile, the test results indicate that the Smart Teacher Book is effective for early childhood education teachers in mitigating stereotypical behavior and suspicion, as evidenced by the readability and effectiveness of the test results. Therefore, the book holds promise as a tool for fostering inclusivity and reducing prejudice in early childhood education settings.

**Keywords:** Preschool teachers, Smart teacher book, Stereotypical behavior, Suspicion behavior, Early childhood education.

1. Introduction

The COVID-19 pandemic influenced nearly every country around the world and disturbed various life aspects, especially those directly related to human necessities, such as health, the economy, and education. One of the most impactful activities in the field of education is the teaching and learning process, which involves teacher-student interactions. The previously applied learning interactions were direct, involving intellectual, psychological, and spiritual components. However, the spread of the COVID-19 pandemic interrupted the teaching interactions. This situation led to teacher-student and inter-student gaps in terms of social interactions. This problem hindered the development of social-emotional skills in early childhood education, a crucial component [1]. Susanto explains that early childhood education strives to stimulate, guide, hone, and provide activities for children to enhance their skills. Early Childhood Education is the education provided to children from birth to six years old.

This condition in children can cause psychological problems and may lead to stress because of sudden and drastic changes. The warm teacher-student interaction is no longer present. This interaction is important for early childhood education to prioritize. In common situations, teachers spend most of the time moving, playing with students, and focusing on children with fun activities [2-5]. The previously applied interactions were full of psychological touches, a warm atmosphere, mutual responsibility, and intense verbal and non-verbal communication. However, the COVID-19 pandemic shattered these interactions. This condition triggers stereotypical behavior and suspicion [6].
In the educational environment, such as early childhood education, stereotypes and suspicions tend to manifest in ethnic forms, often resulting in behaviors such as marginalization, discrimination, and directed insults towards certain ethnic groups. Apart from ethnicity, the manifestations of stereotypes and suspicions within educational settings may also be based on gender, as exemplified by harassment and derogatory treatment towards specific genders, discrimination based on male and female categorizations, and patriarchy over certain gender groups. Religious stereotypes and suspicions can also manifest in the form of disbelief, the assumption that certain religions are more noble and religious, and the defamation of certain religious beliefs. Stereotypes and suspicions are also reflected socially, such as humiliating certain professions and considering certain professions higher than others [7-10]. Animosity is the most obvious consequence of stereotypes and suspicion.

In the educational field, one glaring reality is the oppression and abuse committed by both senior and junior members, resulting in fatalities on numerous campuses, particularly those with official recognition. This includes student brawls and various forms of violence on school premises. On June 14, 2016, Okezone Campus reported 1,880 violent incidents at schools between 2011 and 2015. The most concerning case was the assassination of an elementary school student with the initials A. The perpetrator received negative treatment from his classmate with the initial R, aged eight years. The action caused a damaged brain and the victim’s death. Even in early childhood education, the potential for stereotypes and suspicion is observable, especially in the form of violent behavior both verbally, emotionally, and physically [11, 12].

Children’s learning at home faces numerous challenges, especially during COVID-19 pandemic, which can lead to the development of stereotypical behavior and suspicion. Many parents struggle with a limited understanding of their children’s growth, development, and learning needs. Teaching difficulties stem from unfamiliarity with the educational environment, while keeping children engaged in learning is another common issue. Additionally, parents often face technical challenges with operating gadgets and managing their time due to other responsibilities. Studies by Wardani and Ayriza [13], Emiyati [14], and Dong, et al. [15] also highlighted further obstacles experienced by parents in accompanying children while learning from home, such as the high cost of Internet data, limited teacher exposure related to the given material, time management difficulty, and inadequate online learning facilities.

These complaints made the learning process ineffective and boring for children. When instructing children, parents frequently experience a lack of patience and encounter challenges due to the children's inability to comprehend the provided materials, even after repeated exposure. These problems became more complicated while teaching preschool and elementary school-aged children because they were active, unique, and egocentric. These situations easily provoke the emotional states of the parents and might lead to violence. The complex problems at home might worsen stereotypical behavior and suspicion, as found by Vinkers, et al. [16] and Putri and Rossa [17]. These issues necessitate appropriate and effective solutions that parents must implement while accompanying their children. In this case, parents should also benefit from the activities carried out together with their children.

The children’s ability to break away from stereotypical behavior and suspicion will be an important asset for them to gain success in the future. This ability could be a foundation to adjust the learning and living necessities in the 21st century [18-20].

One effective solution to address this issue is by developing engaging books as learning materials for early childhood education students. Several studies revealed that attractive books could facilitate learning activities between students and parents at home. The study also revealed that this type of implementation prevented learners from becoming bored during their studies. Ulfiah, et al. [21] with research titled "Development of Digital Parenting Teaching Books: Early Childhood Protection Strategies," found positive results by applying books for parents to meet the necessities and rights of children while studying at home. Risma, et al. [22] also found the urgency of educational media for early childhood learning in reducing violence against children. Media could facilitate students during learning. According to previous research, books could support the social learning of early childhood education students. However, books
on stereotype and suspicion prevention are scarce, and the implementations are rarely observed in most classroom learning activities, such as instilling religious and moral values \[23\].

This research focuses on designing an effective Smart Teacher Book for early childhood teachers to prevent stereotypical behavior and suspicion. Conceptually, stereotypes and suspicion are two terms that refer to tendentious behavior towards certain individuals, groups, races, cultures, religions, or genders. Thus, this research aims to provide empirical data on these issues and enhance the learning systems in early childhood education institutions, aligning with the mission of child-friendly schools and the government's educational priorities. The results will guide universities in developing tested teaching materials to combat stereotypes and suspicion in early childhood education. The research results seek to prepare higher-quality early childhood educators by emphasizing an appreciation for children's positive potential and minimizing the occurrence of violence stemming from stereotypical behavior and suspicion. Therefore, this research addresses two main questions: 1) How is the Smart Teacher Book designed to prevent stereotypical behavior and suspicion in Early Childhood Education? and 2) How effective is the Smart Teacher Book for early childhood education teachers in preventing stereotypical behavior and suspicion?

2. Literature Review

The concept of stereotype was initially introduced by journalist Walter Lipmann in 1922 to delineate the preconceived judgments applied to individuals or groups based on specific characteristics \[24, 25\]. Over time, stereotypes evolve beyond merely ethnic distinctions to encompass broader categories such as culture, religion, gender, and sexuality. Within the context of stereotype education, negativity tends to prevail due to several factors: (a) attributing stigma to ambiguous characteristics, such as assuming that a slender friend lacks energy without collecting supporting evidence; (b) generalizing certain traits to apply universally within cultural groups, such as assuming that students pursuing language studies are inherently less intelligent than those opting for science studies; and (c) the perpetuation of “self-fulfilling prophecy,” whereby individuals conform to stereotypes imposed upon them, such as children labeled as lazy, gradually internalizing and adopting this characterization \[26\].

Regardless of their manifestation, stereotypes have serious consequences as the basis for interpreting behavior. Similarly, teachers must refrain from relying on stereotypes while engaging with students, particularly in terms of ethnic or group biases. Conceptually, stereotypes exist in diverse forms. The most common is the gender stereotype. This particular stereotype highlights irrational behaviors associated with both male and female groups. Within an educational setting, an example of the stereotype is the perception that men are more suited for leadership roles in the classroom compared to women. Sometimes, teachers assign women to tasks with limited scope, like sweeping, mopping, or cleaning dirty classroom furniture. Rushworth, et al. \[27\] and Cikara and Fiske \[28\] indicated that stereotypes are contagious as they are passed down as narratives or tales referring to specific groups or ethnicities. However, these narratives may not necessarily align with reality; indeed, some stereotypes are entirely unfounded. The rapid formation of stereotypes fosters negative perceptions in children’s neural pathways and makes them unable to think accurately to gain a better understanding.

In this context, Latifianazalati analyzed various factors contributing to the development of stereotypes. The treatment of boys and girls by their families, including fathers and mothers, could indirectly influence the stereotypes. Peers play a significant role in shaping children's stereotypes from early childhood through middle and high school. They often encourage gender-specific activities, such as boys gravitating towards traditionally masculine pursuits like soccer, while girls engage in activities stereotypically associated with femininity, such as playing with dolls. Schools, as formal educational institutions, convey gender-related messages to children and may treat them differently based on gender. In addition, society also plays a role in shaping children's stereotypes through the societal norms and expectations assigned to boys and girls. For instance, society often portrays women as needing assistance, while it portrays men as problem solvers. Mass media further reinforces gender stereotypes through the portrayal of men and
women in television and newspaper advertisements. Males not only receive more representation, but they also occupy a wider range of prestigious roles than females.

Suspicion refers to irrational hatred, suspicion, and dislike of a particular ethnic group, race, religion, or community. Furthermore, Sarwono, referring to Nelson's perspective, explains that suspicion involves a negative assessment made by individuals or groups towards other different individuals from their group. Suspicion arises from biased perceptions rooted in incomplete or inaccurate information, with a focus on the real or perceived traits of different groups [29]. His research discovered that cultural relations were highly sensitive to the development of suspicion, posing risks if the situation persisted. He also confirmed the dangers of suspicion, highlighting its strong impact on the brain's nervous system, cognitive function, and emotional well-being. Thus, addressing and minimizing suspicion is crucial [30]. Sarwono's research revealed that cultural relations were highly sensitive to suspicion, posing risks if the situation persisted. Telzer explains that the situation provides prolonged exposure and deposits the trait in children’s limbic systems [31]. Johnson, cited by Setyawati [32] explains that suspicion arises from four factors, namely: disparities in how groups are described, the inclination of cultural values upheld by the majority to exert dominance over minorities, entrenched stereotypes between different groups, and a sense of superiority among certain groups. These factors lead them to view others as inferior and powerless.

The developed book contains two primary sections. The first section is for teachers and includes information about stereotypical behavior and suspicion, causal factors of stereotypical behavior and suspicion, the dangers of stereotypical behavior and suspicion, and the efforts to prevent them. The second section is for children and features illustrated material to prevent stereotypical behavior. It covers indicators of social category stereotypes, social identity, conformity, and attribution; and suspicion in the form of indicators of racial, gender, sex, religious, and political suspicion behaviors.

3. Method
3.1. Research Design

A mixed-methods research applied both qualitative and quantitative approaches. The qualitative approach applied the test of developing book validity by involving a focused group discussion of academicians, media experts, child language teachers, and parents. The discussion comprehensively evaluated the participants' understanding and responses to the book's content. The quantitative approach applied a pseudo-experimental method with two specified groups: the experimental group who was given treatment and the control group without any treatment given. The experimental group consisted of 10 teachers. These teachers used the developed book to teach the learners. On the other hand, the control group, consisting of 10 teachers, did not use the developed book.

3.2. Subject of Study

The research subjects consisted of two groups. The first group aimed to examine the readability of the developed book based on the perspectives of environmental academics and practitioners. This group comprised 4 individuals: academicians (a media expert and a child language expert), a teacher, and a parent representative. The researchers selected academicians and experts from Universitas Pendidikan Indonesia, Bandung. On the other hand, the teachers and parents were from early childhood education institutions, such as the Al-Muqoddasah Kindergarten in Bandung, West Java. The second group focused on determining the effectiveness of this group. This phase consisted of the experimental group (10 members) and the control group (10 members). The teachers participating were from Bandung, Indonesia.

3.3. Instrument

The applied instruments were derived from the anatomical indicators described in the book. The applied scoring or scaling categories are: (3) appropriate, (2) less appropriate, and (1) inappropriate. Table 1 shows the applied indicators.
Table 1

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Appropriate (3)</th>
<th>Less appropriate (2)</th>
<th>Inappropriate (1)</th>
</tr>
</thead>
</table>

Chapter I. The awareness of stereotyped behavior and suspicion in early childhood education (Material for teacher)

1. Having the drafts of stereotypes and suspicion
2. Explaining the influential factors of stereotypes and suspicion
3. Explaining the contribution of educational institutions towards stereotypes and suspicious behaviors
4. Explaining the danger of stereotypes and suspicion in early childhood education
5. Instilling feelings of love and affection to prevent stereotypes and suspicion
6. Fostering a preventive climate and culture against stereotypes and suspicion

Chapter II. The pictorial stories to prevent stereotype and suspicious behavior in early childhood education (Material for children)

1. The material of social category-based stereotypes
2. The material of social identity-based stereotypes
3. The material conformity stereotypes
4. The material of attributive stereotypes
5. The material for racial suspicion
6. The material of sex type based-suspicion
7. The material of sex based-suspicion
8. The material of religion based-suspicion
9. The material of political based-suspicion

3.4. Data Analysis

The researchers analyzed the qualitative data from the group discussion to explore the participants' perceptions of the validity of the developed book. Then, the quantitative data from the pseudo-experiment were analyzed with the statistical method. The developed book's validity test result was determined by calculating the values for each subject and comparing the differences between both groups using the T-test. Then, the researchers analyzed to determine its compatibility with the adopted indicators of the book's anatomy and participant assessment.

4. Results

Smart Teacher Book to prevent stereotypical behavior and suspicion in early childhood education (ECE) consists of two chapters. Chapter One discusses "The Awareness of Stereotypical Behavior and Suspicion in Early Childhood Education (ECE)" (Material for Teachers). This chapter includes the concepts of stereotypical behavior and suspicion, influential factors of stereotypes and suspicion, forms and dangers of stereotypical behavior and suspicion, and fostering a climate and culture to prevent stereotypical behavior and suspicion in ECE. Chapter two is “The Pictorial Stories to Prevent
Stereotypical Behavior and Suspicion in ECE (Material for Children). This chapter includes materials on social category-based stereotypes, social identity-based stereotypes, conformity stereotypes, attributive stereotypes, racial suspicion, sex type-based suspicion, sex based-suspicion, religion-based suspicion, and political based-suspicion. Here are some examples of picture stories about stereotypical behavior and suspicion.

Figure 1: The cover design of Smart Teacher Book

![Figure 1](image1.png)

The cover design of smart teacher book.

Figure 2: The illustration of: "Not mocking friends of different ethnicities/races".

![Figure 2](image2.png)

Smart teacher book content: Not mocking friends of different ethnicities/races.
Figure 3: The illustration of: “Not underestimating friends because you feel to be the smartest”.

![Figure 3 Illustration](image)

Smart teacher book content: Not underestimating friends because you feel to be the smartest.

Figure 4: The illustration of: “Not mocking friends because you feel like a rich kid”.

![Figure 4 Illustration](image)

Smart teacher book content: Not mocking friends because you feel like a rich kid.

Figure 5: The illustration of: “Love to share toys with friends”.

![Figure 5 Illustration](image)
The perceptions of the teachers, practitioners, and experts about the Smart Teacher Book, based on qualitative assessment, highlight its benefits in preventing stereotypical behavior and suspicion in early childhood education, such as (1) providing insight into the nature of stereotypical behavior and suspicion in early childhood, along with its associated dangers; (2) presenting conceptual issues about stereotypical behavior and suspicion in early childhood for teacher, alongside illustrated stories about preventing stereotypical behavior and suspicion in early childhood education; (3) using communicative language that is accessible and less theoretical for teachers; (4) including attractive images that engage children to read and learn; (5) offering useful image contents to foster positive attitudes among children; (6) teaching tolerance and respect for others; (7) assisting teachers in resolving children's problems and conflicts at school; and (8) aligning with existing learning themes in school. However, teachers, practitioners, and experts also noted some shortcomings of the book, including: (1) lack of a design tailored for parents to support their understanding and involvement; (2) absence of additional multimedia elements such as pictures, songs, and stories to reinforce the prevention of stereotypical behavior and suspicion; (3) limited depiction of strategies for managing stereotypical behavior and suspicion within the home or family environment; and (4) insufficient contextual image illustrations depicting common instances of stereotypical behavior and suspicion in early childhood education settings.

The researchers used the Shapiro-Wilk test, assisted by SPSS version 22, to determine the normality and homogeneity of the pretest-posttest data before assessing the effectiveness of the developed book. This procedure was useful to examine the distribution of scores by comparing the probability (Sig.) with the alpha value (α). If the value of sig > α, the obtained data have a normal distribution, while the value of sig<0.05 indicates an abnormal data distribution. Table 2 shows the results of the normality test.
Table 2 shows the pre-test and post-test normality tests for the application of Smart Teacher Book to prevent stereotypical behavior and suspicion in early childhood, showing a normally distributed result. The normality test results of the pre-test and post-test data normality test obtained a Sig value > 0.05, Asymp. Sig. (2-tailed) = 0.099.

After ensuring a normal data distribution, the researchers examined the homogeneity of the data by comparing the sig-values with the alpha value ($\alpha$) assisted with SPSS version 22. If Sig > $\alpha$ (0.05), the data is deemed homogeneous. However, if Sig < $\alpha$ (0.05), the data is deemed non-homogeneous. The researchers used the one-way ANOVA test to examine the homogeneity. Table 3 shows the homogeneity test results.

Table 3 above shows the pre-test and post-test homogeneity test with a sig-value <0.05, Asymp. Sig. (2-tailed) =0.000. The results show that the data is homogeneous. After determining the homogeneity of the data, the researchers examined the mean differences using the paired-sample t-test, based on the following proposed hypotheses:

$H_0$: No difference in pretest and posttest mean scores.
$H_1$: Different pretest and posttest mean scores

The analysis has some criteria: if the p-value > 0.00, the result accepts $H_0$ and rejects $H_1$. The researchers determined the significant level by comparing the probability (sig) and alpha ($\alpha$) values. If Sig. > $\alpha$, the result is not significant; if Sig. < $\alpha$, the result is significant. Table 4 shows the pretest-posttest results.

<table>
<thead>
<tr>
<th>Sum of squares</th>
<th>Df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>1520.042</td>
<td>1</td>
<td>1520.042</td>
<td>84.893</td>
</tr>
<tr>
<td>Within groups</td>
<td>393.917</td>
<td>22</td>
<td>17.905</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1913.958</td>
<td>23</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4. The paired-sample t-test results.

<table>
<thead>
<tr>
<th>Paired differences</th>
<th>Mean</th>
<th>Std. deviation</th>
<th>Std. error mean</th>
<th>95% confidence interval of the difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pretest - posttest</td>
<td>34.958</td>
<td>8.670</td>
<td>1.770</td>
<td></td>
<td>31.297</td>
<td>38.619</td>
<td>19.753</td>
</tr>
</tbody>
</table>
Table 4 shows that the obtained sig (2-tailed) is 0.000 <0.005. The result indicates a significant effect on the application of Smart Teacher Book to prevent stereotypical behavior and suspicion in early childhood.

5. Discussion

The research findings indicate that the design and development of the Smart Teacher Book to prevent stereotypical behavior and suspicion in early childhood education comprised two chapters. The first chapter is "The Awareness of Stereotypical Behavior and Suspicion in Early Childhood Education" (Material for Teachers). This chapter covered various aspects, including the concepts of stereotypical behavior and suspicion, influential factors of stereotypes and suspicion, forms and dangers of stereotypical behavior and suspicion, and fostering a climate and culture to prevent stereotypical behavior and suspicion in ECE. The second chapter is "The Pictorial Stories to Prevent Stereotypical Behavior and Suspicion in Early Childhood Education" (Material for Children). This chapter includes materials on social category-based stereotypes, social identity-based stereotypes, conformity stereotypes, attributive stereotypes, racial suspicion, sex type-based suspicion, sex-based suspicion, religion-based suspicion, and political-based suspicion.

This developed book could be a solution to managing stereotypical and suspicious behaviors in young children. Some respondents admitted they began to notice the stereotypical and suspicious behavior symptoms in young children. The manifestations of the behaviors into stereotypes were observable on the indicators of social categories, social identity, and conformity. The same issues were also evident in the indicators of race, gender, sexual orientation, and religion. Therefore, immediate actions are important to manage these behaviors and prevent hatred-based behaviors. Recently, the problem of hatred has been extremely massive in almost all parts of the world, including Indonesia. Ironically, the problem of hatred even extends to the realm of education. One level of education that experiences this hateful behavior is early childhood education, whereas early childhood education should bring peace, happiness, and pleasure within a child-friendly learning atmosphere.

Some studies within the field of early childhood education point out that hatred is an influential factor in violent actions, both verbal, non-verbal, and physical, by students and educators. This issue leads to a variety of social and emotional challenges for children [33]. Violence as a result of stereotypical behavior and suspicion that lead to anarchic and criminal acts, especially in children, certainly requires appropriate management and solutions. Violence experienced by learners may lead to various negative impacts (including death). These impacts can be both short- and long-term. Excessive fear and social withdrawal, discomfort from emotional abuse, including stress and violation, and pain from physical violence are the short-term effects. The long-term impact, an effect with prolonged emergence, may include trauma due to the related sensation or violent experience, excessive suspicion (paranoia) against the surrounding people, antisocial behavior, loss of self-confidence, severe stress and depression, and permanent disability due to excessive violence.

One of the applicable solutions to manage the problems above is to implement a child-friendly school learning development program. Kusdaryani, et al. [34] explain that the necessity of a friendly school is fundamental because the school considers hospitality and respectful culture [35]. Furthermore, learning in child-friendly schools is characterized by the following indicators: inclusiveness and proactiveness, a healthy environment, a sense of safety, a protective climate, active community participation, effectiveness and child-centeredness, and respect for gender equality. This learning application also incorporates active, innovative, creative, and fund-based participation and activities specifically designed for children. These situations are important for early childhood education because they prevent unconscious suspicion and stereotypes against peer schoolmates or among children's parents.

The results of the effectiveness test show that the Smart Teacher Book for preventing stereotypical behavior and suspicion in early childhood education could relieve the tendency for stereotypical behavior and suspicion in children. This confirms that the Smart Teacher Book could prevent stereotypical behavior and suspicious behaviors in early childhood education. A conducive atmosphere in school
learning to prevent stereotypical behavior and suspicion requires several aspects to consider, such as (1) appropriate school programs; (2) a supportive school environment; and (3) adequate infrastructure. Furthermore, Burkley, et al. [36] explain that stereotypical and suspicious behavior could be prevented by realizing a conducive and safe system that avoids cultural offense [35].

6. Conclusion

The Smart Teacher Book, designed to prevent stereotypical behavior and suspicion in early childhood education, consists of two chapters: one for teacher reading and the other for children. Perceptions from teachers, practitioners, and experts indicate positive feedback regarding book’s effectiveness. Some perceptions suggest it addresses existing deficiencies in this area. Smart Teacher Book serves as a valuable resource for both teachers and children, offering alternative reading materials aimed at fostering inclusive environment.

The researchers suggest future research to expand the use of Smart Teacher Book in preventing stereotypes and biases within home environment, involving parents in broader research initiatives. There is potential to develop digital-based Smart Teacher Book to enhance teaching methods.

However, the current research's limitation lies in its narrow scope, prompting the need for future studies to broaden their focus and test the effectiveness of Smart Teacher Book across diverse contexts.

Funding:
This study received no specific financial support.

Institutional Review Board Statement:
The Ethical Committee of the Universitas Pendidikan Indonesia, Indonesia has granted approval for this study on 14 March 2022 (Ref. No. 795/UN40.LP/PT.01.03/2022).

Transparency:
The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Competing Interests:
The authors declare that they have no competing interests.

Authors’ Contributions:
All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Copyright:
© 2024 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

References


