

# Cultural Pregnancy in the Prevention of Prenatal Depression Based on Transcultural Nursing Theory in Pregnant Women

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## ARTICLE INFO

### Article history

Submitted:  
27 August 2025

Revised:  
5 November 2025

Accepted:  
29 November 2025

### Keywords:

Cultural practices;  
Maternal health;  
Mental health.

## ABSTRACT

Cultural pregnancy practices in prenatal care encompass prohibitions on specific behaviors and dietary restrictions that reflect community concerns during pregnancy. These practices may also contribute to prenatal depression. This study seeks to analyze factors related to transcultural nursing theory and cultural pregnancy in preventing prenatal depression among pregnant women in Jember Regency, Indonesia. A descriptive analytical cross-sectional design with a non-proportional stratified random sampling technique was employed, involving 420 participants. Data were collected using a questionnaire based on the eight dimensions of Transcultural Nursing and Cultural Pregnancy theory. The data were analyzed using Spearman's rho test. The results revealed significant correlations among pregnancy culture, social support, economic status, educational background, and cultural beliefs. Technological factors, particularly access to health information, were associated with healthier pregnancy behaviors. Religious and spiritual engagement contributed to stronger coping mechanisms and reduced emotional distress. Family kinship and social interaction played a determining role in identifying and reducing harmful cultural practices. In conclusion, multidimensional cultural, social, technological, and spiritual factors significantly influence prenatal mental health. Strengthening family support, enhancing access to accurate information, and addressing restrictive or harmful cultural practices are essential strategies for preventing prenatal depression among pregnant individuals.



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## INTRODUCTION

Prenatal depression remains one of the most pressing global health problems. The prevalence of postpartum depression in Asia in 2021 was around 3.5%–63.3%, and the prevalence of postpartum depression in Indonesia was 33.5% (Taufiqoh et al., 2021). The prevalence of depression among pregnant women in Indonesia in 2021 reached 6.1% and is widespread throughout Indonesia, both in urban and rural areas (Sri et al., 2024). In 2022, the Jember Regency Health Office recorded maternal mortality rates across several community health centers (Puskesmas) in Jember Regency (Rahmawati, 2024). Jember Regency remains the highest contributor to maternal and infant mortality in East Java, caused by preeclampsia and eclampsia. As of November 2023, there were 39 maternal deaths, while infant deaths reached 128. This depression has a negative impact on both pregnant women and their fetuses. The impact of depression in pregnant women from pregnancy to delivery includes premature birth, miscarriage, and prolonged labor. Impacts on the fetus include low birth weight and fetal hyperactivity (Mauludiyah et al., 2023). These conditions underscore the critical imperative to enhance prenatal care practices and implement preventive measures specifically targeting prenatal depression.

One factor contributing to depression in pregnant women is culture and customs (Puspitasari, 2022). Culture significantly influences social roles, community expectations,

healthcare decision making, and familial support. In Jember, cultural pregnancy practices encompass wearing amulets (talaks), refraining from outdoor activities after sunset, and adhering to specific dietary restrictions, such as abstaining from eggs or squid. While these customs symbolically convey communal concern, they may conflict with evidence-based prenatal care and potentially elevate health risks for both the mother and the fetus.

The cultural habits and behaviors observed among pregnant women in Jember Regency frequently deviate from contemporary medical recommendations. Rather than promoting health, certain practices may inadvertently contribute to preventable complications. This highlights the significance of developing culturally sensitive health promotion strategies to address depression associated with cultural pregnancy practices. To support these initiatives, it is imperative to assess the factors that influence cultural pregnancy in relation to the prevention of prenatal depression. Consequently, this study is structured around the objective of investigating how the eight dimensions of Transcultural Nursing Theory (technology, cultural values and lifestyle, religion and spirituality, political and legal aspects, biological factors, kinship and social structures, economics, and education) interact with cultural pregnancy practices and their role in mitigating prenatal depression. By integrating these multidimensional cultural determinants, this study offers a novel perspective and constitutes a significant contribution to the field of maternal mental health, particularly within culturally diverse populations.

## METHOD

This study employed a descriptive analytical design with a cross-sectional approach, supported by evidence that cross-sectional methods are appropriate for analyzing associations between cultural factors and maternal mental health outcomes. The research framework was based on Leininger's Transcultural Nursing Theory (Sunrise Model), which provides a comprehensive structure for examining multidimensional cultural determinants influencing health behaviors. This theoretical model has been widely applied in studies evaluating cultural influences on maternal well-being, making it suitable for analyzing relationships between transcultural nursing factors and cultural pregnancy practices in the prevention of prenatal depression.

The target population in this study was pregnant women in their first, second, and third trimesters in Jember Regency. The accessible population consisted of all pregnant women in their first, second, and third trimesters in seven villages in Panti District, Jember. The sampling technique used was stratified random sampling (non-proportional), with the sample allocated equally across villages (60 respondents per village). The sampling units were 7 villages, yielding a total sample of 420 respondents.

The inclusion criteria were pregnant women in their first, second, and third trimesters in seven villages in Panti District, Jember Regency, who could read and write. Exclusion criteria included respondents who refused to participate in the study or did not complete the questionnaire. Data collection was conducted using questionnaires (Rochmatillah, 2018). The instruments were adopted from previous research (Rabiatunnisa et al., 2023). To ensure scientific rigor, the instruments underwent validity and reliability assessments prior to field implementation. Testing was conducted on a pilot group of 30 pregnant women attending antenatal care in Jember Regency, who were representative of the main study population in terms of demographic characteristics. Content and construct validity assessments were performed with expert consultation, and reliability testing using Cronbach's alpha yielded values exceeding 0.70 for all subscales, indicating acceptable internal consistency. This testing process ensured that the instrument was robust, contextually appropriate, and generalizable for use in the target population.

The instruments used were as follows:

1. The technology questionnaire, which addressed access to information technology, utilization of technology and information, and the influence of information technology, consisted of five closed-ended questions with yes and no answer options.
2. The religion, spirituality, and philosophy questionnaire, which included parameters such as religious practices, the meaning of life, and religious norms and beliefs, consisted of five closed-ended questions with yes and no answer options.
3. The kinship and family social questionnaire contained five questions about the pregnant woman's relationship with her family and community and their influence, with yes and no answer options.
4. The cultural values, beliefs, and lifestyle questionnaire contains questions to clarify cultural practices believed to impact cultural pregnancy and the prevention of prenatal depression. It contains five closed-ended questions with yes/no answer options.
5. The political and legal questionnaire addresses access to information and knowledge regarding policies and programs for addressing depression in pregnancy in Indonesia. It consists of five closed-ended questions with yes/no answer options.
6. The economic questionnaire contains questions to determine the respondents' economic conditions. It consists of five questions with yes/no answer options.
7. The biological questionnaire contains questions about biological variations, including physical and biological characteristics such as body structure, skin color, disease susceptibility, nutritional preferences and deficiencies, and psychological characteristics.
8. The educational questionnaire assesses the education level of pregnant women.
9. The cultural pregnancy questionnaire analyzes pregnancy rituals and myths practiced by pregnant women during pregnancy.

It contains 10 questions with a Likert scale using responses of never, rarely, often, and very often. Data processing began with data collection, editing, coding, cleaning, and analysis in SPSS version 25.0, using the Spearman Rho test (Azari, 2024). The results of the data processing will be presented in tables and diagrams. The research process began with the preparation of a research proposal and protocol, which were then submitted for ethical clearance to the Nursing Research Ethics Commission (KEPK) of Muhammadiyah University of Jember under registration number 0145/KEPK/FIKES/VI/2025.

## RESULTS

**Table 1. Characteristics of research respondents**

Characteristics	f	%
Age		
< 20 years	20	4.7
20 – 24 years	50	12
25 – 29 years	154	36.7
30 – 34 years	134	31.9
35 – 39 years	50	11.9
≥ 40 years	12	2.8
Tribe		
Java	200	47.6
Madura	220	52.4
Parity		
Nullipara	68	15
Primipara	142	37
Multipara	130	30
Grandemultipara	80	18

Table 1 show the majority of respondents fell within the age groups of 25 to 29 years (36.7%) and 30 to 34 years (31.9%), while the youngest group consisted of respondents aged 40 years and above (2.8%). In terms of ethnicity, the Madurese had the most significant number of respondents (52.4%), followed by the Javanese (47.6%). Regarding parity, the majority of respondents were primiparas (37%), followed by multiparas (30%), grandemultiparas (18%), and nulliparas (15%). These findings suggest that the study participants were predominantly in the reproductive age group, with a relatively balanced ethnic distribution, and that women who had given birth only once had the highest parity.

**Table 2. The relationship between the eight factors of transcultural nursing and cultural pregnancy**

Variable	Cultural Pregnancy			p-value
	Less	Enough	Good	
Technological Factors				
Less	21	0	0	0.001
Enough	2	71	56	
Good	10	60	200	
Religious, Spiritual, and Philosophical Factors				
Less	4	3	2	0.001
Enough	2	58	2	
Good	14	35	300	
Family Kinship and Social Factors				
Less	9	10	0	0.001
Enough	10	20	12	
Good	20	19	320	
Factors of Values, Culture, Beliefs, and Way of Life				
Less	9	55	5	0.001
Enough	14	71	53	
Good	13	50	150	
Political and Legal Factors				
Less	10	5	5	0.001
Enough	3	71	45	
Good	11	70	200	
Economic Factors				
Less	20	10	50	0.001
Enough	7	59	14	
Good	50	60	150	
Biological Factors				
Less	8	5	5	0.001
Enough	4	60	26	
Good	15	7	290	
Education Factor				
Elementary school	22	1	41	0.001
Junior high school	10	60	5	
Senior high school	12	10	250	
College	1	5	3	

Based on Table 2, eight factors in transcultural nursing demonstrated a significant association with pregnancy culture (p-value=0.001). Notably, the majority of respondents with a positive pregnancy culture (200 respondents) belonged to the good technology factor category. Similarly, the religious, spiritual, and philosophical factors showed a similar pattern, with the majority of respondents with a positive pregnancy culture reporting a positive religious factor (300 respondents). Additionally, the kinship and social factors indicated that respondents with strong social support were more likely to have a positive pregnancy culture (320 respondents). Furthermore, the values, culture, beliefs, and lifestyle factors indicated that respondents in the positive category dominated the positive pregnancy culture (150 respondents). Lastly, the

political, legal, economic, and biological factors revealed that respondents with favorable conditions across these three factors were more likely to have a positive pregnancy culture. Moreover, the education factor demonstrated that respondents with higher levels of education (university) were more likely to have a positive pregnancy culture (250 respondents). Overall, these results underscore the significance of various transcultural factors in shaping a positive pregnancy culture.

## **DISCUSSION**

### **The relationship between technological factors and cultural pregnancy**

This demonstrates that information sources significantly influence a person's cultural identity. Information sources such as cell phones, television, and social media can provide information on appropriate and inappropriate pregnancy behaviors that can be applied in everyday life, particularly in relation to culture. Having information sources can help a pregnant woman understand what constitutes good and harmful cultural practices. Pregnant women require health information to empower themselves, practice preventive health behaviors, enhance self-care skills, and manage anxiety in the face of new health issues or stressful situations. This phase, known as the information-seeking phase, aids them during the transition to motherhood. As expectant mothers prepare and adapt to their new role, numerous information needs arise. The health literacy level of pregnant women influences their information-seeking strategies and subsequent health-seeking behavior. Providing pregnancy-related information is positively correlated with maternal and child survival. Pregnant women need information about their babies' health, and the use of this information will impact the health of both mothers and babies. Access to adequate information has the potential to reduce numerous complications and adverse birth outcomes (Lathifah et al., 2021).

Community health centers (Puskesmas) already offer facilities to enhance knowledge about pregnancy, encompassing both cultural and non-cultural aspects. For pregnant women registered as patients in their respective areas, this serves as a valuable means to introduce or seek information on community monitoring or surveillance. Nevertheless, due to the limitations inherent in the current Puskesmas system, such as the inability to track the nutritional adequacy of pregnant and breastfeeding women, this information is still manually recorded (Gunawan et al., 2023). The information technology owned, utilized, and used by pregnant women can significantly influence their decisions regarding self-care and overall health improvement during pregnancy. With access to appropriate information technology, pregnant women can make informed choices about which cultural practices are beneficial and which may pose risks to their well-being.

### **The relationship between religious, spiritual, and philosophical factors and cultural pregnancy**

Research has shown a connection between religious, spiritual, and philosophical factors and cultural pregnancy. Pregnant women who engage in religious activities aligned with their beliefs can experience improved mental well-being, including reduced anxiety, stress, and other mental health issues. A strong spiritual connection can offer a sense of calm and comfort, which can help mitigate the risk of depression during pregnancy. This finding is corroborated by previous research, which suggests that the positive and beneficial aspects of spirituality experienced by pregnant women can mitigate stress levels, thereby reducing the likelihood of depression occurring during pregnancy (Yousriatin et al., 2022).

Mental imbalance in pregnant women can lead to various complications during pregnancy, including delayed labor and severe anemia in the mother. The fetus may also experience fetal distress, resulting in an unstable fetal heart rate and necessitating a cesarean delivery. Therefore, spirituality plays a crucial role in the well-being of pregnant women. By providing spiritual

support, anxiety and stress can be reduced, minimizing the risk of complications and improving the overall health and survival of both mothers and fetuses (Astuti et al., 2023).

Spiritual experiences during pregnancy not only bring inner peace but also serve as a powerful coping mechanism for managing stress and anxiety, which are common during the antenatal period. By fostering spiritual well-being, pregnant women can adopt adaptive coping strategies that promote health-promoting behaviors. Religious practices like prayer, dhikr, and reciting verses from the Quran have been shown to alleviate symptoms of perinatal depression and anxiety, boost self-confidence, and induce a sense of calm. Moreover, spirituality has been demonstrated to significantly reduce stress and anxiety, ultimately enhancing the overall quality of life for pregnant women. Research indicates that integrating obstetric counseling with spiritual content can positively affect the psychological aspects of quality of life for pregnant women (Wahyuni & Istikhomah, 2025).

While religious activities are essential for the mental well-being of pregnant women, midwives and nurses must be cognizant of the intersection of these practices with cultural pregnancy traditions. In numerous communities, religious rituals are deeply intertwined with cultural beliefs surrounding pregnancy, and some may conflict with contemporary health guidelines. Consequently, health professionals should identify which religious-cultural practices support maternal health and which may pose risks, ensuring that only culturally rooted practices that are safe and beneficial are promoted to pregnant women.

### **The relationship between family kinship, social factors, and cultural pregnancy**

Based on the research findings, it is evident that there is a connection between family kinship and social and cultural factors during pregnancy. This suggests that families play a crucial role in supporting the mental well-being of pregnant women by providing entertainment, offering support, and consistently encouraging them to engage in positive activities. Additionally, families should be mindful of the cultural dynamics within their households. This means that unhealthy cultural practices must be addressed to ensure the physical and mental health of pregnant women. This finding is corroborated by previous research, which indicates that positive and supportive family relationships can enhance the mental well-being of pregnant women, thereby mitigating the risk of anxiety, stress, and depression (Putri & Fujiana, 2022).

Lack of family support during pregnancy can lead to anxiety, which may result in premature birth, learning difficulties, hyperactivity, or even autism. Mothers also experience the effects of inadequate family support, often complaining of fatigue, sleep deprivation, anxiety about the delivery process, fear, nightmares, and anxiety. Family support can manifest in various forms, such as attention, encouragement, affection, gifts, information, and services from loved ones like spouses, parents, children, and other close relatives. These forms of support help the recipient feel loved and valued (Kartika et al., 2021).

The support provided to pregnant women encompasses informational, appraisal, and instrumental support. The attention and support from their closest family members are invaluable in helping them overcome the anxiety that arises from the physical and psychological changes they experience during pregnancy. Family members' support and affection offer comfort and security, especially when pregnant women feel afraid and worried about their pregnancy. The active role of the family in supporting pregnant mothers ultimately leads to increased concern for their own health and the health of their fetus (Febriati & Zakiyah, 2022).

Occasionally, the support provided to pregnant women can contribute to emotional distress, particularly when it is associated with cultural pregnancy practices. Certain cultural rituals may impose demands or expectations that result in an increased burden and anxiety, thereby elevating the risk of depression. Consequently, healthcare professionals must continuously monitor and educate families, ensuring that the cultural practices they endorse are supportive rather than detrimental.

## **The relationship between factors of values, culture, beliefs, and way of life, and cultural pregnancy**

There is a relationship between factors of values, culture, beliefs, and way of life and cultural pregnancy. Culture is always related to taboos and regulations that pregnant women must follow during pregnancy, which are believed to be beneficial for the mother. However, sometimes these deeply rooted cultures and regulations can actually increase stress and depression in pregnant women. This finding is corroborated by previous research, which indicates that society places a robust cultural emphasis on the care of pregnant women, encompassing adherence to customs and avoidance of taboos and dietary prohibitions (Astianti et al., 2023).

Beliefs about customs can significantly influence pregnant women's food choices. For instance, there is a prevalent belief that pregnant women are prohibited from consuming fish, as it is feared that the baby may develop worms and have an unpleasant fishy odor. However, it is important to note that consuming fish, particularly sea fish, is highly recommended. Fish is low in fat, high in protein, and rich in omega-3 and omega-6 fatty acids, which are essential for the baby's growth and development. During the first trimester, pregnant women are often advised to avoid specific foods, including fish, meat, eggs, and milk. These foods are nutritious and crucial for pregnant women's well-being, especially during the first trimester when the baby's growth and development are at their peak. Unfortunately, these restrictions can lead to malnourishment if pregnant women fail to consume the necessary nutrients (Zulfiani et al., 2022).

In addition to cultural factors influencing pregnant women's behavior, certain regions still adhere to taboos on consuming specific foods. For instance, in Javanese society, pregnant women are advised to refrain from eating eggs and meat. While some cultural behaviors and dietary taboos practiced by Indonesian communities may have health-related reasons, many are considered less acceptable (Nisa, 2021).

Traditions and cultural practices that develop in society are values that belong to a nation. Therefore, culture must be respected, but its impact on health must still be considered. Cultural activities in society need to be assessed and studied, and this is where the role of nurses and midwives is needed. The cultural assessment aims to enhance the health outcomes of pregnant women and mitigate the risk of depression during pregnancy.

## **The relationship between political and legal factors and cultural pregnancy**

There is a relationship between political and legal factors and cultural pregnancy. This relates to the programs pregnant women participate in, both during pregnancy and in preparation for childbirth. Programs such as the Health Care and Social Security Agency (BPJS Kesehatan) deserve attention, as they can help pregnant women assess themselves physically and mentally to prevent depression during pregnancy. This finding is corroborated by previous research indicating that the KIA book is used as a strategic approach to empower communities, particularly families, to preserve their health and access high-quality maternal and child health services (Hariastuti & Saraswati, 2023).

Appropriate support and services can effectively address perinatal depression or anxiety. Community health workers play a crucial role in helping pregnant women adopt healthy lifestyles, improve their moods, and prevent potential complications that could affect their babies due to perinatal depression or anxiety. Early assessment of anxiety and depression is paramount for providing timely treatment and mitigating adverse birth outcomes. Pregnant women who receive support from health workers are more likely to seek help promptly. Additionally, health workers wield significant influence and are trusted by their patients (Yasfi et al., 2023).

Unequal access to healthcare facilities is exacerbated by high-risk pregnancies, which often involve a history of health problems in pregnant women, such as gestational hypertension, preeclampsia, eclampsia, and metabolic factors that can contribute to unstable maternal health. This combination of a history of health problems and limited access to healthcare further increases the risk of morbidity and mortality (Christiawan et al., 2023). Additionally, this can lead

to anxiety and depression in pregnant women. The government has implemented several policies and programs to enhance maternal health. These initiatives are particularly effective in addressing both physical and mental well-being, thereby reducing the risk of depression during pregnancy.

### **The relationship between economic factors and cultural pregnancy**

There is a relationship between economic factors and cultural pregnancy. This shows that family income plays a significant role in the mental well-being of pregnant women. Savings as preparation for childbirth has been shown to influence the incidence of depression in pregnant women. However, the reality in society is that saving is rarely done, which can risk causing disorders during pregnancy, such as pregnancy depression. Low economic status is linked to higher levels of depression during pregnancy. Financial difficulties can cause mothers to worry about providing a suitable environment for their children, leading to psychological distress, including depression. Moreover, low income can exacerbate psychological conditions in pregnant women, resulting in a higher prevalence of psychological disorders among low-income groups (Qanita & Effendi, 2023).

Economic status has a threefold chance of experiencing antepartum depression. Postpartum depression is also one of the effects of untreated antenatal depression. Therefore, a health worker-led approach is needed so that pregnant women of low socioeconomic status can access government-provided service programs. This can help pregnant women improve their health, both physically and psychologically. Pregnant women from lower socioeconomic backgrounds often resort to various alternative practices to enhance their health, such as engaging in specific pregnancy customs and rituals. However, these practices can sometimes lead to adverse health outcomes, resulting in discomfort rather than improved well-being.

### **The relationship between biological factors and cultural pregnancy**

There is a relationship between biological factors and cultural factors in pregnancy. This means that every pregnant woman who receives sufficient nutrition and undergoes regular health checks will have no physical or mental problems. This finding is supported by previous research that identifies preeclampsia as a significant contributor to maternal mortality, ranking second only to hemorrhage. Preeclampsia is an acute pregnancy complication that can manifest during pregnancy, labor, and the postpartum period, thereby posing substantial stress and anxiety to expectant mothers (Susanti & Maisaroh, 2023).

Regular physical activity, such as yoga, swimming, and prenatal walking, enhances the body's and mind's ability to manage pain during labor. Mothers who are confident in their ability to engage in physical activity are less likely to experience anxiety during labor and the postpartum period. However, physical activity typically decreases during pregnancy. Despite this, physical activity offers numerous benefits to pregnant women, including reducing lower back and pelvic pain, increasing metabolic and cardiopulmonary capacity, and lowering the risk of gestational diabetes. It also aids in labor, maintains the mother's physical condition, reduces fatigue during daily activities, regulates weight gain, reduces anxiety and depression, and improves mood (Syam et al., 2023).

Preventive measures to prevent postpartum depression in mothers include early detection of preeclampsia, especially in women with a history of preeclampsia. These measures include providing health education and counseling regarding a healthy lifestyle, regular exercise, and regular check-ups during pregnancy and after delivery, as recommended (Syifa, 2025).

Pregnant women who experience no physical complaints and receive adequate nutrition tend to perceive their weight as ideal and are satisfied with their body shape. However, even though they feel satisfied with their physical condition, changes in body shape that occur during pregnancy can also cause psychological stress. Therefore, a balance among physical health,

adequate nutrition, and self-acceptance of body changes is a crucial factor in determining pregnant women's overall well-being.

### **The relationship between the education factor and cultural pregnancy**

There is a relationship between education and cultural factors in pregnancy. This means that the higher a person's education, the better their cultural knowledge, leading to positive behavior during pregnancy. This finding is corroborated by previous research, which indicates a correlation between maternal education and the extent of knowledge acquired in managing various pregnancy-related challenges, including the occurrence of depression during pregnancy (Sari & Umami, 2023).

A mother's higher education can lower the risk of antepartum depression during the second and third trimesters. Conversely, mothers with lower levels of education are more prone to experiencing depressive symptoms. This disparity can be attributed to the fact that mothers with higher levels of education tend to be more proactive in seeking knowledge about their pregnancy and are better equipped to address challenges, thereby mitigating psychological stress (Qanita & Effendi, 2023).

The risk of depression is higher among individuals with a low educational background. This increased risk is linked to the observation that women with higher educational attainment often secure better jobs with higher salaries, enabling them to support their finances, maintain a healthy lifestyle, and improve their mental well-being (Dianna et al., 2023).

### **CONCLUSION**

The study found a significant correlation between various social, cultural, economic, and educational factors and pregnancy culture. Technological factors, such as information sources, influence cultural identity and pregnancy behaviors. Religious, spiritual, and philosophical factors, including religious activities and spiritual support, contribute to mental well-being and coping mechanisms during pregnancy. Family kinship and social factors, including family support and addressing unhealthy cultural practices, are crucial for the physical and mental health of pregnant women.

Family support, including informational, appraisal, and instrumental support, is crucial for pregnant women's mental health, helping them overcome anxiety and promoting a healthy pregnancy. However, cultural practices, such as food restrictions, can sometimes lead to depression and malnutrition. Economic factors, including family income and savings, also impact mental well-being, with low-income women at higher risk of depression. Higher maternal education lowers antepartum depression risk due to better knowledge and financial stability, while lower education increases risk.

### **AUTHOR'S DECLARATION**

#### **Authors' contributions and responsibilities**

**AAA:** Collected data, prepared an activity plan, and prepared a manuscript; **DIL:** Analyzed research data and research needs and finances; **IB:** Make conclusions, research outputs, and reporting evaluations.

#### **Funding**

This research was funded by the Penelitian Dosen Pemula (PDP) grant from the Directorate of Research, Technology, and Community Service (DRTPM).

### Availability of data and materials

All data are available from the authors.

### Competing interests

The authors declare no competing interests.

### ACKNOWLEDGEMENT

The author would like to express sincere gratitude to the Directorate of Research, Technology, and Community Service (DRTPM) for the funding support through the Penelitian Dosen Pemula (PDP) grant. Appreciation is also extended to the institution, respondents, and all parties who contributed to the successful completion of this research.

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