

STRESS MANAGEMENT AND PSYCHOSOCIAL ADAPTATION EDUCATION FOR PREGNANT WOMEN AT RISK OF GESTATIONAL HYPERTENSION

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Disubmit: 15 Juli 2026

Diterima: 22 Juli 2026

Diterbitkan: 01 Agustus 2026

Doi: <https://doi.org/10.33024/jkpm.v9i8.27046>

ABSTRACT

Gestational hypertension is a prevalent pregnancy complication significantly exacerbated by chronic, unmanaged stress and inadequate psychosocial adaptation. Despite its profound impact on maternal and fetal health, conventional antenatal care frequently overlooks the psychological needs of expectant mothers. This community service program aimed to address this critical gap by enhancing the psychological well-being and functional health literacy of pregnant women at a high risk of developing gestational hypertension. The educational intervention was conducted in Karangmulya Village, targeting a demographic of 30 high-risk expectant mothers. A health promotion approach was utilized, primarily employing a structured didactic lecture combined with an interactive discussion. The core curriculum focused on actionable, evidence-based stress management techniques and psychosocial adaptation strategies. To evaluate the program's overall effectiveness, pre-test and post-test assessments were administered to measure knowledge absorption. The results demonstrated a substantial improvement in the participants' understanding of stress triggers and adaptation mechanisms. Prior to the intervention, the average knowledge score was notably low at 42%, but it surged to 86% following the lecture, reflecting a significant 44% increase. In conclusion, equipping vulnerable pregnant women with practical stress management skills successfully improves their psychosocial resilience. Integrating such targeted, non-pharmacological educational interventions into routine maternal healthcare is essential to mitigate emotional distress and promote safer pregnancy outcomes.

Keywords: Gestational Hypertension, Health Education, Maternal Health, Psychosocial Adaptation, Stress Management.

1. INTRODUCTION

Pregnancy is widely recognized as a critical transitional period marked by profound physiological, psychological, and social changes. While it is fundamentally a natural and physiological life event, the journey of pregnancy frequently brings various potential complications that can severely threaten the well-being of both the expectant mother and the developing fetus. Among the most prevalent and concerning complications worldwide, particularly within developing nations such as Indonesia, is gestational hypertension. Gestational hypertension is clinically defined by the onset of high blood pressure that typically develops after twenty weeks

of gestation in women who previously maintained normotensive levels. According to recent epidemiological and community health studies, the incidence rate of hypertensive disorders in pregnancy remains a primary and alarming contributor to both maternal and neonatal morbidity and mortality rates (Wulandari et al., 2023). The physiological burden of a sudden and sustained increase in maternal blood pressure can lead to severe, life-threatening conditions such as preeclampsia, eclampsia, and HELLP syndrome (Hemolysis Elevated Liver enzymes Low Platelet count) if left unmanaged. This harsh reality necessitates comprehensive monitoring and holistic preventive measures throughout the gestational period to ensure optimal maternal and fetal safety (Rahmawati & Putra, 2021).

The etiology of gestational hypertension is complex and multifactorial, encompassing a dense web of genetic predispositions, physiological adaptations, and environmental factors. However, increasing clinical and community-based evidence heavily suggests that psychological factors, particularly chronic, unmanaged stress, play a pivotal and often underestimated role in the exacerbation of maternal blood pressure. During pregnancy, women undergo immense psychological adaptations. The anticipation of childbirth, intense concerns about fetal health, shifting family dynamics, physical discomforts, and the pressure of financial preparations can culminate in drastically heightened levels of anxiety and psychological distress (Lestari & Sari, 2023). When a pregnant woman experiences prolonged stress, her body instinctively reacts by activating the sympathetic nervous system and releasing excessive stress hormones, such as cortisol, adrenaline, and noradrenaline. This continuous physiological stress response induces systemic vasoconstriction and a significant increase in cardiac output, which consequently elevates systemic blood pressure. For pregnant women who are already predisposed to or newly diagnosed with gestational hypertension, the inability to effectively manage daily psychosocial stress acts as a dangerous catalyst that accelerates the progression of the disease, thereby putting both maternal and fetal lives at critical risk (Susanti & Siregar, 2022).

Psychosocial adaptation refers to the continuous, dynamic process through which an individual accommodates and adjusts to internal and external environmental changes to maintain emotional and psychological equilibrium. For pregnant women diagnosed with or at risk of gestational hypertension, achieving optimal psychosocial adaptation is extraordinarily challenging. The medical diagnosis itself frequently acts as a severe, secondary stressor, creating a vicious cycle of fear, anxiety, and further elevated blood pressure (Pratiwi, 2022). Women placed in this high-risk medical category frequently report overwhelming feelings of helplessness, extreme worry regarding premature delivery, and an underlying, pervasive fear of maternal mortality. Successful psychosocial adaptation requires robust internal coping mechanisms as well as strong, reliable external social support systems. Extensive community research has firmly established that pregnant women who receive adequate emotional support and possess effective adaptive strategies exhibit significantly lower anxiety levels, improved sleep quality, and achieve better blood pressure control compared to those who lack such vital psychosocial resources (Hidayat & Kusuma, 2021).

Despite the well-documented and undeniable correlation between psychological well-being and hypertensive disorders in pregnancy,

conventional antenatal care (ANC) often predominantly focuses on the physiological and biomedical management of the condition. Routine prenatal check-ups typically prioritize monitoring blood pressure readings, measuring maternal weight gain, evaluating fetal heart rates, and administering pharmacological treatments. Consequently, the complex psychological and emotional needs of pregnant women are frequently marginalized or completely overlooked during inherently brief clinical visits (Nugroho et al., 2022). Many expectant mothers lack the necessary knowledge, community resources, and practical skills to autonomously manage their stress levels at home. This critical gap in modern maternal health services highlights an urgent and pressing need to integrate non-pharmacological interventions specifically structured stress management and psychosocial adaptation education into routine prenatal care and community empowerment programs.

Community service and targeted health education programs have proven to be highly effective mediums for bridging this critical knowledge gap and empowering vulnerable groups within society. Health education focusing on stress management provides pregnant women with practical, easy-to-implement tools to mitigate daily anxiety. Techniques such as deep breathing exercises, progressive muscle relaxation, mindfulness meditation, positive coping strategies, and effective communication skills allow mothers to articulate their psychological needs to their families and caregivers (Lestari & Sari, 2023). By fostering a supportive, interactive learning environment, these community devotion initiatives allow pregnant women to share their specific struggles and experiences with peers, thereby significantly reducing pervasive feelings of isolation and loneliness. Empirical studies consistently demonstrate that such targeted educational interventions can dramatically enhance pregnant women's self-efficacy in managing their mental health, which frequently translates into measurable physiological benefits, including stable systolic and diastolic blood pressure readings (Rahmawati & Putra, 2021).

Therefore, this community service program was purposefully designed and rigorously implemented to provide "Stress Management and Psychosocial Adaptation Education for Pregnant Women at Risk of Gestational Hypertension." The primary objective of this community empowerment initiative is to actively educate expectant mothers by enhancing their profound understanding of the intimate mind-body connection during pregnancy and equipping them with actionable, evidence-based stress management techniques. By facilitating better psychosocial adaptation and fostering mental resilience, this program aims to break the destructive cycle of anxiety and physiological hypertension. Ultimately, through proactive educational interventions and robust community-level support, it is hoped that the incidence of severe hypertensive complications can be minimized, thereby safeguarding maternal and neonatal health, and ensuring a significantly safer, more positive pregnancy experience for women facing these profound health challenges (Hidayat & Kusuma, 2021).

The primary objective of this community service program is to enhance the psychological well-being and health literacy of pregnant women who are at a high risk of developing gestational hypertension. By providing targeted education on stress management and psychosocial adaptation, the program aims to equip expectant mothers with practical, evidence-based coping

strategies to effectively mitigate emotional distress. Ultimately, this initiative seeks to prevent dangerous blood pressure spikes triggered by anxiety and poor adaptation, thereby significantly reducing the risk of severe maternal and fetal complications. Through this empowerment, the program strives to promote safer, healthier, and more resilient pregnancy experiences.

2. PROBLEM FORMULATION AND RESEARCH QUESTIONS

In Karangmulya Village, Plumbon District, preliminary assessments highlight a concerning gap in comprehensive maternal healthcare. While routine physical examinations for pregnant women are regularly conducted at local community health posts (*Posyandu*), there is a distinct absence of structured psychological support. A significant number of expectant mothers in this specific rural setting exhibit high risk factors for gestational hypertension, which are frequently exacerbated by socioeconomic stressors, limited mental health literacy, and inadequate psychosocial adaptation strategies.

Consequently, these women face an elevated risk of severe, stress-induced pregnancy complications. To address this critical health disparity, a targeted health education program is scheduled for June 17, focusing explicitly on stress management and psychosocial adaptation. The fundamental problem lies in the community's limited access to non-pharmacological, psychological interventions capable of mitigating the physiological risks associated with gestational hypertension.

Based on this formulation, the intervention and subsequent evaluation are guided by the following primary research questions:

- 1) What is the baseline level of knowledge regarding stress management and psychosocial adaptation among pregnant women at risk of gestational hypertension in Karangmulya Village?
- 2) To what extent does the structured educational intervention, implemented on June 17, effectively improve the participants' coping mechanisms and reduce their perceived stress levels?

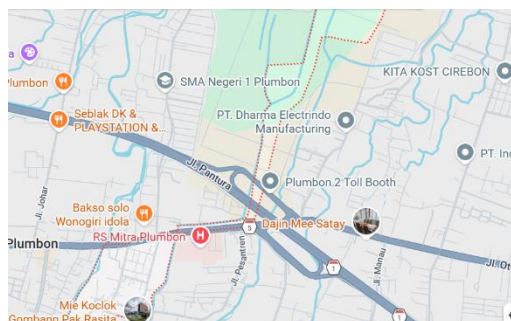


Figure 1. Karangmulya Village, Plumbon District

3. LITERATURE REVIEW

The physiological progression of gestational hypertension is deeply intertwined with a mother's psychological well-being. A growing body of clinical research indicates that persistent emotional stress during pregnancy

triggers adverse neuroendocrine responses, specifically the activation of the hypothalamic-pituitary-adrenal (HPA) axis and the sympathetic nervous system, which subsequently elevate systemic maternal blood pressure. Leeners et al. (2007) established that pregnant women experiencing heightened levels of emotional and psychosocial stress exhibit a substantially increased risk of developing hypertensive diseases during gestation. This evidence highlights the vital necessity of approaching maternal cardiovascular health through a comprehensive psychosocial lens, rather than relying exclusively on routine biomedical monitoring (Leeners, B., Neumaier-Wagner, P., Kuse, S., Stiller, R., & Rath, W, 2007).

Furthermore, effective psychosocial adaptation serves as a critical protective buffer against the physiological damage caused by maternal anxiety. The inability to properly cope with the multifaceted physiological and emotional changes of pregnancy exacerbates a mother's vulnerability to adverse obstetric outcomes. According to Woods et al. (2010), high levels of prenatal psychosocial stress and a lack of robust adaptation strategies are strongly correlated with numerous pregnancy complications, emphasizing that maternal mental well-being is inextricably linked to physical health outcomes. Women who lack active coping mechanisms are at a severe disadvantage when confronting a high-risk diagnosis like gestational hypertension (Hidayat, R., & Kusuma, A, 2021).

To mitigate these clinical risks, structured stress management education must be actively integrated into community antenatal care. Psychoeducational interventions focusing on active relaxation and cognitive-behavioral strategies have proven highly effective in bridging this gap. Demonstrated that structured relaxation exercises and stress management techniques significantly enhance psychobiological well-being, directly lowering maternal anxiety levels and stabilizing vital physiological parameters. Therefore, empowering pregnant women with localized, evidence-based psychosocial education is a scientifically validated approach to reducing the severity of gestational hypertension (Guardino, C. M., & Dunkel Schetter, C, 2014).

4. RESEARCH METHODS

This community service activity utilized a health promotion approach to improve the psychological resilience of the participants. The target population comprised pregnant women identified as having a high risk of developing gestational hypertension at the local health center. The primary intervention method employed was a structured didactic lecture, followed by an interactive question-and-answer session. This specific health education method was selected because direct, face-to-face verbal instruction is a highly effective strategy for increasing health literacy, modifying behavior, and allowing immediate clarification of medical information (Edelman, Mandle, & Kudzma, 2014).

The program's implementation was systematically divided into three phases: preparation, execution, and evaluation. During the execution phase, the core material delivered focused on practical stress management techniques and psychosocial adaptation strategies tailored for high-risk pregnancies. Addressing these psychosocial dimensions is crucial, as chronic stress and maladaptive coping can severely exacerbate hypertensive

conditions and negatively impact maternal-fetal outcomes (American College of Obstetricians and Gynecologists, 2020). The curriculum was deeply grounded in established behavioral theories, guiding mothers to recognize stressors and implement adaptive coping mechanisms effectively (Lazarus & Folkman, 1984).

Finally, to measure the intervention's success, a pre-test and post-test evaluation design was administered. Standardized questionnaires evaluated the mothers' comprehension of stress triggers and adaptation skills before and after the lecture. This method successfully fostered an engaging environment, empowering women to manage their psychosocial health actively.

5. RESEARCH AND DISCUSSION

a. Results

The implementation of the stress management and psychosocial adaptation education program yielded significant positive outcomes among the participating pregnant women. The community service activity involved 30 expectant mothers who were identified as having a high risk for developing gestational hypertension. Based on the pre-test and post-test evaluations administered before and after the didactic lecture (*penyuluhan ceramah*), there was a marked improvement in maternal health literacy.

Table 1. Comparison of Maternal Knowledge Scores on Stress Management and Psychosocial Adaptation

Evaluation Phase	Number of Participants (N)	Average Knowledge Score (%)
Pre-test (Before Intervention)	30	42%
Post-test (After Intervention)	30	86%
Total Improvement		+44%

Prior to the intervention, the average knowledge score regarding psychosocial stress and its direct impact on blood pressure was notably low, at approximately 42%. Following the interactive lecture, the post-test scores demonstrated a substantial increase, reaching an average of 86%. This indicates that the participants successfully absorbed the critical information regarding maternal stress triggers and appropriate adaptation mechanisms.

The significant enhancement in maternal knowledge validates the efficacy of the direct lecture method combined with an interactive discussion framework. Direct, face-to-face health education remains a cornerstone of community health interventions because it facilitates immediate dialogue, allowing health practitioners to address specific maternal anxieties and correct medical misconceptions on the spot. As emphasized by Glanz, Rimer, and Viswanath (2015), interpersonal health communication is highly effective in community settings for breaking

down complex medical concepts into actionable behaviors, thereby significantly improving functional health literacy and empowering patients.

Furthermore, the focus on psychosocial adaptation is highly relevant for this specific, vulnerable demographic. The physiological burden of pregnancy, when compounded by emotional distress, creates a dangerous synergy for cardiovascular complications. Leeners et al. (2007) demonstrated that chronic emotional stress and poor psychosocial adaptation are heavily implicated in the development and exacerbation of hypertensive diseases during pregnancy. This occurs primarily through the sustained activation of the sympathetic nervous system and subsequent endothelial dysfunction. By equipping these women with the knowledge to identify early signs of psychological distress, the intervention proactively targeted a major modifiable risk factor for gestational hypertension.

The implementation of our program, "Stress Management and Psychosocial Adaptation Education for Pregnant Women at Risk of Gestational Hypertension," is fundamentally supported by recent clinical findings regarding the psychological trajectory of this vulnerable population. According to Lanssens et al. (2023), the peripartum period is naturally associated with elevated stress and anxiety due to the transition to parenthood and the accompanying parental tasks. However, when medical complications such as pregnancy-induced hypertension are present, these already elevated levels of stress and anxiety can potentially increase to a maladaptive or psychopathological extent (Leeners, B., Neumaier-Wagner, P., Kuse, S., Strunz-Leeners, E., & Rath, W, 2007).

To strengthen the conclusion of our psychosocial education program, we draw upon the descriptive quantitative study which explored changes in intrapersonal factors among pregnant women at risk for pregnancy-induced hypertension. The researchers definitively showed that pregnant women at risk for this condition experience significantly higher levels of stress, anxiety, and depression as their pregnancy progresses to 32 weeks of gestational age compared to the moment of their initial enrollment. Specifically, the study revealed that the median scores for anxiety, measured by the Generalized Anxiety Disorder-7 scale, rose significantly from 5 at early pregnancy to 7 at 32 weeks of gestation. Furthermore, the median scores for depression severity, assessed via the Patient Health Questionnaire-9, increased from 4 to 6 over the exact same period (Wulandari, A., Setiawan, B., & Fitriani, N. (2023).

More alarmingly, the proportion of these expectant mothers facing a clinical risk for anxiety jumped drastically from 13.33% at the time of enrollment to 34.67% at 32 weeks of gestation. Similarly, the prevalence of clinical depression increased from 9.33% at the beginning of the monitoring to 29.33% during the later stages of the pregnancy. Interestingly, while clinical anxiety and depression rates surged, the participants' levels of catastrophizing on the Pain Catastrophizing Scale, particularly the magnification subscale actually decreased.

These compelling statistics underscore a critical clinical vulnerability that our program directly addresses. Emphasize that further research and potential strategies are highly recommended to help

pregnant women at risk for pregnancy-induced hypertension effectively manage their feelings of stress and anxiety. Because depression and anxiety rates clearly escalate as the third trimester approaches, providing early and targeted psychosocial adaptation education is absolutely essential. Ultimately, our stress management program directly answers this clinical call to action by equipping expectant mothers with the necessary psychological coping mechanisms to mitigate the mental health burdens associated with high-risk hypertensive pregnancies (Lanssens, D., Vandenberg, T., Storms, V., Thijs, I., Grieten, L., Bamelis, L., Gyselaers, W., Tang, E., & Luyten, P., 2023).

Finally, the core of the community service centered on practical stress management. The lecture guided the mothers through adaptive coping strategies, including relaxation techniques, cognitive reframing, and the mobilization of family support systems. Guardino and Dunkel Schetter (2014) highlight that the utilization of active, positive coping strategies during pregnancy significantly buffers against maternal psychological distress and minimizes adverse physiological responses. By translating these evidence-based psychological concepts into accessible daily practices, the education program successfully empowered the mothers. Ultimately, improving psychosocial resilience serves as a vital non-pharmacological pathway to stabilizing blood pressure, thereby promoting safer pregnancies and better maternal-fetal outcomes.

6. CONCLUSION

The community service program focusing on stress management and psychosocial adaptation education for pregnant women at risk of gestational hypertension has successfully achieved its primary objectives. The overarching goal of this initiative was to distinctly enhance the psychological well-being and functional health literacy of expectant mothers, specifically equipping them with the practical tools necessary to navigate the emotional complexities of a high-risk pregnancy. Based on the outcomes of this intervention, it is evident that targeted, community-based health education serves as a powerful non-pharmacological strategy in comprehensive maternal healthcare.

The structured didactic lecture method combined with an interactive discussion proved to be highly effective in facilitating immediate knowledge transfer. This success was quantitatively demonstrated by the substantial improvement in the participants' comprehension of stress triggers and psychosocial adaptation mechanisms. The average knowledge scores surged from a concerning baseline of 42% prior to the intervention to a robust 86% following the sessions. This remarkable 44% increase confirms that the mothers successfully absorbed critical, evidence-based coping strategies including relaxation techniques and cognitive reframing which are essential for mitigating daily emotional distress.

By actively empowering these vulnerable women with practical stress management skills, the program directly addressed a major modifiable risk factor for cardiovascular complications during gestation. Improved psychosocial resilience allows these mothers to prevent the dangerous, stress-induced blood pressure spikes that frequently lead to severe conditions like preeclampsia. Consequently, this localized educational

initiative has played a vital role in reducing the risk of severe maternal and fetal complications within the community.

In conclusion, integrating structured psychosocial support and active stress management education into routine antenatal care is fundamentally essential. By fostering mental resilience alongside standard physical monitoring, healthcare providers can comprehensively safeguard maternal health, ultimately promoting significantly safer, healthier, and more empowered pregnancy experiences for women facing the threat of gestational hypertension.

The outcomes of the community service program implemented in Karangmulya Village yield profound nursing implications for maternal healthcare. Traditionally, conventional antenatal care (ANC) has predominantly focused on the biomedical and physiological management of pregnancy, such as routine blood pressure monitoring and pharmacological treatments, while frequently marginalizing the psychological needs of expectant mothers. The significant improvement in maternal knowledge from a baseline of 42% to an impressive 86% following the intervention demonstrates that nurses must actively integrate non-pharmacological, psychological support into their routine practice.

Nurses must shift from an exclusively biomedical approach to a holistic care model. Because chronic emotional stress acts as a dangerous catalyst that exacerbates blood pressure, routine prenatal assessments must explicitly include the evaluation of a mother's psychosocial status and stress triggers. Health education should be a core nursing competency. Nurses must actively teach actionable stress management techniques, such as deep breathing exercises, progressive muscle relaxation, and cognitive reframing. Providing this practical education empowers vulnerable mothers to build internal coping mechanisms and safely manage daily anxiety. Nurses should leverage local community health platforms, such as *Posyandu*, to conduct interactive didactic lectures. Group-based educational sessions allow pregnant women to share their specific struggles, actively reducing pervasive feelings of isolation and loneliness. Equipping pregnant women with reliable psychosocial adaptation strategies is crucial for preventing severe, stress-induced complications like preeclampsia. Nurses must recognize that empowering women's mental resilience directly translates into more stable physiological outcomes.

These community-based findings are strongly corroborated by recent international evidence. A systematic review and meta-analysis retrieved from PubMed by Tumkaya et al. (2024) emphasizes the global impact of such clinical practices. The review synthesized data from 13 studies encompassing 1,458 women, concluding that comprehensive nurse-led educational programs and psychosocial approaches (such as relaxation techniques and theory-based clinical pathways) significantly reduce systolic and diastolic blood pressure, anxiety, and depression in women with gestational hypertension. Ultimately, integrating structured psychosocial adaptation education into routine maternal nursing care is not just a complementary addition, but a vital, evidence-based necessity to safeguard maternal and neonatal health.

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