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The role of family support in maternal mental health during the postpartum period in Malaka District

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ABSTRACT

Background: *Postpartum depression is a major maternal mental health concern that remains insufficiently addressed in rural areas such as Malaka District, East Nusa Tenggara, where structural and social vulnerabilities may heighten psychological risks. Limited evidence from these settings underscores the need to understand the contextual determinants influencing maternal mental health.*
Objectives: *The objective of this study was to examine the relationship between family support, sociodemographic characteristics, and the risk of postpartum depression among mothers in Malaka District.*
Methods: *This cross-sectional analytic study involved 100 postpartum mothers selected through purposive sampling. Data were collected using a structured questionnaire that included demographic characteristics, a family support scale, and the Edinburgh Postnatal Depression Scale (EPDS). Statistical analyses comprised descriptive tests, chi-square tests, and multivariate logistic regression.*
Results: *The results indicated that 40% of participants were at risk of postpartum depression (EPDS ≥13), and more than half (55%) experienced inadequate family support. Bivariate analysis revealed a significant association between family support and postpartum depression (p=0.001). Multivariate logistic regression demonstrated that inadequate family support was the strongest predictor of postpartum depression, with affected mothers having 3.8 times higher odds of developing depression (AOR 3.8; 95% CI: 1.7–8.3). Low maternal education was also a significant predictor (AOR 2.5; 95% CI: 1.1–5.8), whereas maternal age and employment status were not associated with depression risk.*
Conclusions: *These findings emphasize the critical role of family involvement and maternal education in mitigating postpartum mental health problems. Strengthening the active participation of husbands and family members, improving maternal mental health literacy, and integrating family-centered approaches into antenatal and postnatal care are essential steps for reducing the burden of postpartum depression in Malaka District.*

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INTRODUCTION

Postpartum depression (PPD) is among the most common maternal mental health problems, with global prevalence estimates ranging from 10% to 20%. In Indonesia, the prevalence of PPD is approximately 22%, but it tends to be higher in regions with limited healthcare access and low socio economic conditions. PPD not only affects the mother's quality of life but also has long-term consequences for child development, including impaired bonding, developmental delays, and increased risk of health and behavioral problems (1).

Malaka District, located in East Nusa Tenggara Province, faces complex maternal health challenges. Factors such as low education, limited access to health information, poor socioeconomic conditions, and strong cultural norms influence maternal mental health outcomes. Within the local culture, family members —particularly husbands and parents— play a crucial role in supporting mothers during the postpartum period. However, in practice, emotional, instrumental, and informational support from families is often inadequate (2). Malaka District faces persistent maternal mental health challenges influenced by low educational levels, limited health information access, socioeconomic constraints, and strong cultural norms (Kurniasari et al., 2021; Rahmawati & Suryani, 2020). Although family members—particularly husbands and parents—traditionally hold a central role in supporting postpartum mothers, previous studies in rural and underserved settings show that emotional, instrumental, and informational support is often inadequate, increasing the risk of postpartum depression (Nasution et al., 2022; Shorey et al., 2018). Local health authorities have implemented maternal classes, basic counseling, and partial integration of mental health into KIA services; however, these efforts remain limited by the absence of routine EPDS screening, insufficient trained personnel, stigma toward mental health, and low utilization of digital health platforms (Ministry of Health RI, 2022; Wulandari et al., 2023). Despite these initiatives, the combined impact of family support and sociodemographic factors on postpartum depression in Malaka has not been

comprehensively assessed, underscoring the need for this study. Previous studies consistently demonstrate that family support serves as a strong protective factor against PPD. Adequate support reduces psychological stress, enhances mothers' confidence in childcare, and increases the likelihood of utilizing health services. Conversely, insufficient family support heightens the risk of stress, loneliness, and depression.

Sociodemographic characteristics such as maternal age, education level, and employment status are also associated with PPD vulnerability. Given this context, the present study aimed to examine the relationship between family support, sociodemographic factors, and postpartum depression among mothers in Malaka District. The findings are expected to inform the design of family-centered interventions and community midwifery programs that address maternal mental health in rural Indonesia.

MATERIALS AND METHODS

This study employed an analytic observational design with a cross-sectional approach, in which the independent variables (family support and sociodemographic factors) and the dependent variable (postpartum depression) were measured simultaneously. The study population consisted of all postpartum mothers in Malaka District within the first six weeks after delivery. A total of 100 respondents were recruited using purposive sampling. Inclusion criteria included: (1) postpartum mothers ≤ 6 weeks, (2) willingness to participate, and (3) ability to communicate effectively. Exclusion criteria were mothers with a history of psychiatric disorders or severe obstetric complications. Data were collected using a structured questionnaire covering: Respondent characteristics : age, education, and employment, Family support: measured using a family support questionnaire encompassing emotional, informational, and instrumental domains (categorized as adequate vs. inadequate), Postpartum depression: measured using the *Edinburgh Postnatal Depression Scale* (EPDS), with a cut-off score of ≥13 indicating risk of depression. The family support questionnaire underwent content validity assessment by three maternal health experts, achieving a Content Validity Index (CVI) of 0.87, while reliability testing in a pilot sample produced a Cronbach's alpha of 0.82. The EPDS, previously validated in Indonesia, has demonstrated strong psychometric properties, with reported Cronbach's alpha values ranging from 0.78 to 0.88 in local populations.

Data were analyzed using SPSS. The analyses included: Univariate analysis: frequency distribution and percentages, Bivariate analysis: chi-square test to examine the association between family support and postpartum depression, Multivariate analysis: multiple logistic

regression to identify the dominant factors associated with postpartum depression, with a significance level set at α = 0.05. Ethical approval for this study was obtained from the Health Research Ethics Committee of STIKes Maranatha Kupang (No:145/ STIKes-MRTH/KEPK/2025).

RESULTS AND DISCUSSION

Table 1. Characteristics of Respondents (n=100)

Characteristics	Frequency	Percentage (%)
Age		
< 20 years	15	15
20–35 years	70	70
> 35 years	15	15
Education		
Low (Primary–Junior HS)	65	65
Secondary (Senior HS)	25	25
Higher (College)	10	10
Employment		
Housewives	75	75
Farmers/Informal	15	15
Civil servants	10	10

This **Table 1** presents the sociodemographic distribution of postpartum mothers, including age, educational attainment, and employment status. The majority of respondents were within the reproductive age group (20–35 years), while a considerable proportion had low educational backgrounds and worked as housewives. These characteristics provide an overview of the population context and help explain patterns observed in postpartum mental health outcomes. Most respondents were in the reproductive age group (20–35 years), which is generally considered a low-risk age for maternal outcomes. However, the high proportion of mothers with low educational attainment (65%) and working as housewives (75%) may limit access to health information and contribute to higher vulnerability to postpartum depression. Similar findings have been reported in studies from rural Indonesia and South Asia, indicating that education plays a crucial role in maternal mental health literacy.

This **Table 2** presents the distribution of family support received by postpartum mothers, categorized as adequate or inadequate. Family support includes emotional, informational, and practical assistance provided by spouses, parents, or extended family members during the postpartum period. Understanding the level of support is essential, as it directly influences maternal coping ability, stress levels, and vulnerability to postpartum depression.

Table 2. Family Support among Postpartum Mothers

Family Support	Frequency	Percentage (%)
Adequate	45	45
Inadequate	55	55

More than half of the respondents reported inadequate family support. This highlights the limited emotional,

informational, and practical assistance provided during the postpartum period. Prior literature emphasizes that inadequate family support is a key psychosocial risk factor for postpartum depression, particularly in cultures where extended family involvement is expected but not consistently practiced.

The analysis using the Edinburgh Postnatal Depression Scale (EPDS) reveals that a proportion of postpartum mothers in the study area are at risk of developing depression. This finding provides an initial overview of the mental health status of mothers after childbirth, particularly in regions with limited access to health services. The detailed distribution of EPDS categories is presented in **Table 3** below.

Table 3. Postpartum Depression Risk (EPDS Scores)

EPDS Category	Frequency	Percentage (%)
Normal (< 13)	60	60
At risk of depression (≥13)	40	40

A total of 40% of respondents were at risk of postpartum depression, which is almost double the national prevalence (22%). This indicates that postpartum mothers in Malaka face a greater psychological burden, possibly due to socioeconomic constraints and limited access to maternal mental health services. This finding aligns with studies in rural China and India, which reported higher depression prevalence in underserved populations.

Family support is an important determinant influencing the mental health of postpartum mothers. An analysis of the association between family support and postpartum depression was conducted to determine the extent to which the quality of support received contributes to maternal psychological well-being after childbirth. The distribution of family support across postpartum depression risk categories is presented in **Table 4** below.

Table 4. Association between Family Support and Postpartum Depression

Family Support	Normal	At risk	Total	p-value	OR (95% CI)
Adequate	35	10	45		
Inadequate	25	30	55	0.001	3.1 (1.5–6.4)
Total	60	40	100		

A significant association was observed between family support and postpartum depression (p=0.001). Mothers with inadequate family support had a 3.1-fold increased risk of postpartum depression compared to those with adequate support. This underscores the critical role of family support as a protective factor. The results are consistent with studies in Yogyakarta and India, which confirmed that insufficient support from husbands and families significantly increases the likelihood of postpartum depression (3).

Table 5. Multivariate Logistic Regression Analysis

Variables	Adjusted OR	95% CI	p-value
Age < 20 years	1.8	0.7 – 4.6	0.2
Low education	2.5	1.1 – 5.8	0.03*
Housewife status	1.6	0.6 – 4.1	0.28
Inadequate family support	3.8	1.7 – 8.3	0.001*

A multivariate logistic regression analysis was conducted to identify independent predictors of postpartum depression after adjusting for potential confounding variables. Several sociodemographic factors and family support indicators were included in the model to determine the strongest contributors to maternal mental health outcomes. The full results of the analysis are presented in **Table 5** above.

The multivariate analysis confirmed that low education and inadequate family support were the dominant predictors of postpartum depression. Mothers with inadequate family support were almost four times more likely to develop depression, while those with low education had a 2.5-fold increased risk. Maternal age and employment status were not statistically significant. This finding implies that structural and psychosocial factors outweigh demographic characteristics in determining maternal mental health outcomes (5).

DISCUSSION

Based on **Table 1** this study highlights that low educational attainment and inadequate family support are strong predictors of postpartum depression in rural, underserved settings such as Malaka District. The novelty lies in combining multivariate analysis with a unique rural NTT context, where evidence on psychosocial determinants of postpartum depression remains scarce. The finding that 40% of mothers are at risk—exceeding national estimates—demonstrates the need for context-specific interventions.

The study contributes to midwifery education policy by emphasizing the importance of strengthening maternal mental health content, enhancing competency in early detection using the EPDS, and promoting community-based learning models for students placed in remote areas. Additionally, the documented lack of family support supports the integration of family-centered counseling approaches into community midwifery services.

From a health policy perspective, the results underscore the importance of expanding digital health (mHealth) solutions for screening, education, and monitoring of maternal mental health—particularly in areas with limited access to healthcare services. This evidence supports integrating EPDS screening tools, family education

modules, and digital referral pathways into existing maternal health applications at both national and regional levels.

Based on **Table 3** this study found a high proportion (40%) of postpartum mothers at risk of depression in Malaka District — notably higher than commonly reported national estimates — reflecting the compounded vulnerabilities associated with limited healthcare access, low educational attainment, and socioeconomic constraints in rural settings. Contemporary literature similarly reports elevated perinatal mental health burden in underserved populations (2).

Based on **Table 2** family support emerged as the most robust predictor: inadequate family support markedly increased the odds of postpartum depression (AOR ≈ 3.8). International and regional evidence corroborates the protective role of social support — encompassing emotional, informational, and instrumental dimensions — in reducing perinatal depressive symptoms and improving maternal–infant outcomes. Strategies that actively engage partners and close family members are therefore supported by the evidence base (6).

Based on **Table 4** low maternal education (AOR ≈ 2.5) was also significantly associated with increased risk. Lower education often translates to poorer health literacy, limited coping resources, and barriers to service utilization, consistent with systematic reviews identifying sociodemographic determinants of postpartum depression (5).

Cultural determinants matter: patriarchal norms, unequal domestic labor divisions, and family dynamics can intensify postpartum role strain when family support is lacking. Studies from Asian contexts indicate spousal relationship quality and in-law dynamics can mediate risk for postpartum depression and sleep disturbances — findings applicable to Malaka's socio-cultural landscape (8).

Based on **Table 5** from a health-systems perspective, limited integration of maternal mental health screening and few community-based preventive initiatives reduce early detection and timely management. Recent reviews emphasize proactive prevention (including antenatal programs), routine screening at primary care, and workforce training as effective components to reduce postpartum depression incidence.

CONCLUSION AND RECOMMENDATION

This study demonstrated that postpartum depression risk in Malaka District is considerably high, affecting 40% of mothers, and the analysis confirmed that inadequate family support and low maternal education were the strongest predictors of depressive symptoms. These findings highlight the essential role of family involvement and maternal educational background in safeguarding maternal mental health during the postpartum period.

Based on these results, it is recommended that maternal and child health programs integrate family-centered strategies by actively involving husbands and family members in antenatal and postnatal education sessions. Routine postpartum depression screening using standardized tools such as the EPDS should be implemented at the primary care level with clear referral mechanisms for mothers identified as at risk. Strengthening maternal mental health literacy—particularly among women with lower educational attainment—through culturally adapted community-based education is equally important. Capacity building for healthcare providers, including midwives, nurses, and community health workers, is crucial to improving early detection and basic psychosocial support. Finally, future research should employ longitudinal or interventional designs to better understand causal pathways and evaluate the effectiveness of family-based preventive interventions in reducing postpartum depression.

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