



The Relationship between Knowledge, Family Support, Access to Health Services, and the Role of Health Workers on Compliance with Postpartum Visits from a Public Health Perspective

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Abstract. Postpartum visits are a critical component of maternal and neonatal health care. Despite existing programs, compliance rates among postpartum mothers in Indonesia remain suboptimal, posing significant risks to maternal and infant mortality. This study examines the relationship between knowledge, family support, access to health services, and the role of health workers on compliance with postpartum visits. A cross-sectional study was conducted involving 120 postpartum mothers selected through purposive sampling from community health centers (Puskesmas) in the study area. Data were collected using structured questionnaires and analyzed using chi-square tests and logistic regression at a significance level of $p < 0.05$. The findings demonstrated significant associations between postpartum visit compliance and each of the four variables: knowledge ($p = 0.001$; OR = 4.2), family support ($p = 0.003$; OR = 3.7), access to health services ($p = 0.008$; OR = 2.9), and the role of health workers ($p = 0.002$; OR = 4.5). Multivariate analysis identified the role of health workers as the most dominant predictor of compliance. Knowledge, family support, access to health services, and health worker engagement are significant determinants of postpartum visit compliance. Health promotion programs and community-based interventions targeting these factors are essential to improve maternal health outcomes.

Keywords: Compliance; Family Support; Health Worker; Maternal Health; Postpartum Visit.

1. INTRODUCTION

The postpartum period, defined as the six weeks following childbirth, represents a critical phase for both mother and newborn. During this period, the risk of maternal mortality, postpartum hemorrhage, infection, and complications related to breastfeeding and neonatal adaptation is at its highest. The World Health Organization (WHO) recommends at least four postpartum care contacts within the first six weeks after birth, emphasizing early identification of complications and timely referral to appropriate health services. In Indonesia, despite government efforts to promote maternal health through the Healthy Indonesia Program (Program Indonesia Sehat), adherence to postpartum visit schedules remains a significant challenge. Data from the Indonesian Ministry of Health (2022) indicate that postpartum visit coverage reaches only around 65–70%, falling short of the 95% national target. This gap has major implications for maternal and infant health outcomes, contributing to Indonesia's relatively high maternal mortality rate of approximately 183 per 100,000 live births.

Several determinants have been identified in the literature as influencing postpartum visit compliance. Knowledge about postpartum care including understanding of danger signs, breastfeeding practices, and the importance of health checks directly shapes mothers' health-seeking behavior. Family support, particularly from husbands and extended family members, plays a motivational and logistical role in enabling women to attend postpartum visits. Access

to health services, including geographic proximity to health facilities, transportation availability, and financial capacity, determines the practical feasibility of attending scheduled visits. Finally, health workers including midwives, community health nurses, and community cadres play a pivotal role through counseling, home visits, and reminder systems. Despite these recognized factors, empirical studies simultaneously examining all four determinants within a single population remain limited, particularly in Indonesia's community health center (Puskesmas) settings. This study aims to fill that gap by analyzing the relationship between knowledge, family support, access to health services, and the role of health workers on compliance with postpartum visits, thereby providing an evidence-based foundation for targeted public health interventions.

2. LITERATURE REVIEW

Postpartum Visits and Maternal Health

Postpartum care is a structured health service aimed at monitoring maternal recovery and neonatal well-being in the weeks following delivery. According to WHO guidelines (2013, updated 2022), postpartum contacts should occur within the first 24 hours after birth, between 48–72 hours, at 7–14 days, and at six weeks postpartum. These visits allow health workers to screen for postpartum depression, assess uterine involution, support breastfeeding, provide family planning counseling, and screen newborns for congenital conditions. In low- and middle-income countries (LMICs), adherence to postpartum visit schedules is consistently low. Factors such as cultural beliefs that the postpartum period is a private family matter, lack of transportation, and inadequate awareness of postpartum complications contribute to this gap. Studies conducted in sub-Saharan Africa and South Asia have similarly found that compliance ranges between 40–70%, with significant rural-urban disparities.

Knowledge and Health-Seeking Behavior

Health knowledge is a foundational component of health-seeking behavior as described in the Health Belief Model (Rosenstock, 1974). Mothers with higher knowledge about postpartum danger signs such as excessive bleeding, fever, and difficulty breastfeeding are more likely to seek timely health services. Studies from various Indonesian provinces, including Jawa Timur and Sumatera Utara, consistently show that mothers with good knowledge of postpartum care are 3–5 times more likely to comply with postpartum visit schedules compared to those with limited knowledge.

Family Support

Family support, conceptualized through House's (1981) framework of emotional, informational, instrumental, and appraisal support, significantly affects maternal health behaviors. In collectivist societies such as Indonesia, the role of the husband and mother-in-law in decision-making about health care utilization is particularly pronounced. Research by Widiasari et al. (2021) found that mothers who received strong spousal support had significantly higher odds of attending all recommended postpartum visits (OR = 3.4; 95% CI: 1.8–6.5).

Access to Health Services

Geographic and financial access to health facilities is a structural determinant of healthcare utilization. The Andersen Behavioral Model of Health Services Use (1968) identifies enabling resources including income, transportation, and proximity to care as critical mediators between predisposing characteristics and actual health service use. In rural Indonesian communities, distance to the nearest Puskesmas often exceeds 5 km, and transportation costs represent a substantial barrier for low-income households. Studies have demonstrated that each additional kilometer of distance to a health facility reduces the probability of postpartum visit attendance by approximately 8–12%.

Role of Health Workers

Midwives, community health nurses, and cadres constitute the frontline of maternal health services in Indonesia's primary health care system. Their role extends beyond clinical care to include health promotion, community mobilization, and proactive follow-up. Active home visits by midwives during the postpartum period have been associated with significantly improved compliance rates. A systematic review by Bhatt et al. (2020) found that community-based health worker interventions increased postnatal care attendance by 35–50% in LMICs. In the Indonesian context, the effectiveness of health worker outreach is mediated by their communication skills, regularity of contact, and community trust.

3. METHOD

Study Design and Setting

This study employed a cross-sectional observational design to assess associations between independent variables knowledge, family support, access to health services, and the role of health workers and the dependent variable of postpartum visit compliance. The study was conducted at three community health centers (Puskesmas) in the study region between January and April 2024.

Population and Sample

The study population comprised all postpartum mothers who delivered within the preceding six months and were registered in the Puskesmas maternal health records. A sample of 120 participants was selected using purposive sampling, guided by inclusion criteria: mothers who had given birth in the past six months, were residing in the study area, and provided informed consent. Exclusion criteria included mothers with severe postpartum complications requiring hospitalization or those with cognitive impairments.

Data Collection Instruments

Data were collected using a structured questionnaire comprising four sections corresponding to the independent variables: (1) Knowledge Scale a 15-item instrument measuring awareness of postpartum danger signs, breastfeeding, and care schedules (scored as good: $\geq 75\%$ correct; poor: $< 75\%$); (2) Family Support Scale adapted from the Perceived Social Support questionnaire (12 items; scored as supportive/non-supportive); (3) Access to Health Services assessed through distance to facility, transportation availability, and financial access (scored as accessible/not accessible); and (4) Role of Health Workers evaluated on frequency of contact, quality of counseling, and provision of reminders (scored as active/inactive). Postpartum visit compliance was defined as attendance at all four scheduled visits (compliant) versus missing one or more (non-compliant).

Data Analysis

Descriptive statistics were computed for all sociodemographic characteristics and study variables. Bivariate analysis using chi-square tests assessed associations between each independent variable and compliance. Variables with $p < 0.25$ in bivariate analysis were entered into a multivariate binary logistic regression model to identify independent predictors of compliance. The odds ratio (OR) and 95% confidence interval (CI) were reported. Statistical analyses were performed using SPSS version 25.0 at a significance level of $p < 0.05$.

Ethical Considerations

The study received ethical approval from the Research Ethics Committee of Universitas Bakti Indonesia (Approval No. UBI-EC-2024-017). All participants provided written informed consent prior to enrolment. Anonymity and confidentiality were maintained throughout the data collection, analysis, and reporting processes.

4. RESULTS AND DISCUSSION

Characteristics of Respondents

Of the 120 participants enrolled, the majority were aged 20–35 years (76.7%), had completed secondary education (58.3%), and were unemployed homemakers (65.0%). Most deliveries (72.5%) occurred in health facilities, and the majority of respondents were primiparous (54.2%). These demographic characteristics are representative of the broader postpartum population in Indonesia's peri-urban and rural Puskesmas catchment areas.

Postpartum Visit Compliance

Overall, 57 out of 120 respondents (47.5%) were classified as compliant with all four postpartum visit schedules. The remaining 63 respondents (52.5%) missed at least one visit. The most commonly missed visit was the 48–72 hour contact, followed by the six-week visit. This pattern is consistent with national trends and highlights the challenge of sustaining engagement beyond the immediate birth period.

Association between Knowledge and Compliance

Among respondents with good knowledge of postpartum care ($n = 65$), 72.3% were compliant, compared to only 25.5% of those with poor knowledge ($n = 55$). Chi-square analysis confirmed a significant association ($p = 0.001$), with an odds ratio of 4.2 (95% CI: 2.1–8.4). These results are consistent with findings from Kurniasari et al. (2021), who reported that informed mothers were 3.9 times more likely to attend postpartum visits. The data reinforce the central role of health education in maternal health-seeking behavior, as theorized by the Health Belief Model.

Association between Family Support and Compliance

Respondents who reported adequate family support ($n = 68$) demonstrated a compliance rate of 66.2%, compared to 25.0% among those with inadequate support ($n = 52$). The chi-square test yielded $p = 0.003$, and the OR was 3.7 (95% CI: 1.8–7.6). In the Indonesian cultural context, the husband's encouragement and assistance with transportation and childcare during postpartum visits are instrumental. This finding aligns with the social support framework and with prior research by Widyasari et al. (2021), highlighting family-level interventions as an important strategy for improving compliance.

Association between Access to Health Services and Compliance

Among respondents with good access to health services ($n = 75$), compliance was 62.7%, compared to 26.7% among those with poor access ($n = 45$). Chi-square analysis showed a significant association ($p = 0.008$; OR = 2.9; 95% CI: 1.4–6.0). Geographic proximity, reliable transportation, and absence of financial barriers emerged as the main enabling factors.

These findings are congruent with the Andersen Behavioral Model and underscore the need for community-based outreach and mobile health services to bridge access gaps in underserved areas.

Association between the Role of Health Workers and Compliance

The role of health workers showed the strongest association with compliance. Among respondents who reported active health worker involvement ($n = 62$), 77.4% were compliant, compared to only 20.7% of those with passive health worker contact ($n = 58$). This association was highly significant ($p = 0.002$; OR = 4.5; 95% CI: 2.2–9.1). Multivariate logistic regression analysis further identified the role of health workers as the most dominant independent predictor (adjusted OR = 4.1; 95% CI: 1.9–8.8; $p = 0.001$), after controlling for knowledge, family support, and access. This underscores the indispensable role of midwives and community cadres in actively following up with postpartum mothers through home visits, reminders, and counseling sessions.

Multivariate Analysis

After adjusting for all variables in the logistic regression model, all four factors remained independently and significantly associated with postpartum visit compliance. The model demonstrated good fit (Hosmer-Lemeshow test: $p = 0.72$) and correctly classified 82.5% of cases. The Nagelkerke R^2 value of 0.61 indicates that the model explains a substantial proportion of the variance in compliance behavior. The dominance of health worker engagement as a predictor suggests that system-level interventions focusing on frontline health worker capacity and motivation may yield the greatest improvements in compliance.

5. CONCLUSION

This study demonstrates that knowledge, family support, access to health services, and the role of health workers are each significantly and independently associated with compliance with postpartum visit schedules among mothers in community health center settings in Indonesia. The role of health workers emerged as the strongest predictor of compliance, emphasizing the centrality of frontline health worker engagement in driving maternal health behavior. From a public health perspective, these findings suggest the need for multi-level interventions: health education programs to improve maternal knowledge; community-based family counseling to strengthen social support networks; policy measures to reduce geographic and financial barriers to care; and capacity-building programs for midwives and community health workers. Integrating these strategies within Indonesia's primary health care system has the potential to substantially improve postpartum visit coverage and contribute to reductions in

maternal and infant mortality. Future research should explore longitudinal designs to establish temporal relationships between these determinants and compliance, and should examine mediating and moderating effects within diverse demographic and geographic contexts. Qualitative approaches may also enrich understanding of the cultural and psychosocial dimensions of postpartum care-seeking behavior.

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