



The Relationship Between the Role of Educators and the Level of Knowledge of Mothers During The Postpartum Period

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Abstract: *The postpartum period is a crucial phase in the health cycle of mothers and babies, requiring adequate knowledge to support maternal recovery, prevent complications, and care for newborns. Health workers, particularly midwives, play a key role as educators in enhancing mothers' knowledge during this period. However, the effectiveness of healthcare educators in improving the knowledge of postpartum mothers has shown mixed results. This study aimed to analyze the relationship between the role of healthcare educators and the level of knowledge of mothers during the postpartum period. A quantitative observational analytical design with a cross-sectional approach was used. The study sample consisted of 30 postpartum mothers selected through purposive sampling. Data were collected using a structured questionnaire that measured mothers' perceptions of educators' roles and their knowledge of postpartum and newborn care. Data analysis was conducted univariately to describe respondent characteristics and bivariately using the Spearman's Rho correlation test. The results showed that most respondents rated educators' roles as fair to good, while the level of knowledge of postpartum mothers was mostly fair to poor. The Spearman's Rho test revealed a p-value of 0.125 and a correlation coefficient of $r = 0.286$, indicating no statistically significant relationship, although a weak positive correlation was observed. This study concludes that increasing postpartum mothers' knowledge is influenced not only by the role of health educators but also by other factors such as education, experience, and access to information. A more comprehensive and integrated approach to postpartum education is necessary.*

Keywords: Educator Role; Health Education; Maternal Knowledge; Midwife; Postpartum Period.

1. INTRODUCTION

The postpartum period is a critical period in the health cycle of mothers and babies because it involves physiological recovery, psychological adaptation, and the formation of sustainable baby care and breastfeeding practices. The quality of maternal knowledge during the postpartum period plays an important role in determining health outcomes, including successful breastfeeding, prevention of postpartum complications, and newborn care. Globally, the World Health Organization emphasizes that maternal health education during the postpartum period is an essential component of maternal health services to reduce maternal and infant morbidity and mortality (WHO, 2016; WHO, 2023). However, knowledge gaps among postpartum mothers are still frequently reported, especially in low- and middle-income countries, reinforcing the urgency of strengthening the role of health workers as educators (WHO, 2023).

From an epidemiological perspective, various reports indicate that health issues during the postpartum period—such as puerperal infections, hemorrhage, lactation disorders, and mental health problems—still contribute significantly to the burden on maternal health. UNICEF reports that uneven quality of postpartum care contributes to suboptimal infant care and breastfeeding practices, which ultimately impact short- and long-term health (UNICEF, 2021;

UNICEF, 2023). In this context, increasing postpartum mothers' knowledge through effective education is seen as a low-cost but high-impact preventive strategy.

Clinically, the postpartum period is characterized by hormonal changes, uterine involution, lactogenesis, and adaptation to the role of parenthood. Mothers' lack of understanding of these processes can trigger anxiety, incorrect self-care practices, and delays in seeking help when danger signs appear. The WHO recommends scheduled postpartum visits accompanied by comprehensive counseling and education to ensure mothers understand postpartum danger signs, wound care, nutrition, hygiene, mental health, and proper breastfeeding practices (WHO, 2016; WHO, 2022). Thus, education is not merely a supplement to care but the core of quality postpartum care.

The role of educators—who in the context of health services are often midwives and nurses—is key in the process of knowledge transfer. The role of educators includes the ability to convey accurate, relevant, and easily understandable information, using methods and media appropriate to the characteristics of mothers, as well as building therapeutic relationships that encourage active participation. Adult learning theory emphasizes that adults learn most effectively when the material is linked to real experiences and immediate needs (Knowles et al., 2015). In the context of postpartum care, mothers are in a phase of high readiness to receive information that has a direct impact on their health and that of their babies, so the quality of the educator's role is crucial.

Previous studies have shown a positive relationship between the role of healthcare educators and increased maternal knowledge. A study by McFadden et al. (2017) reported that support and education from health workers during the postpartum period significantly improved mothers' knowledge and breastfeeding practices. Another study by O'Connor et al. (2019) found that structured and communicative postpartum counseling was associated with an increase in mothers' understanding of infant care and postpartum danger signs. Similar findings were also reported in studies in developing countries, where the quality of midwives' communication and education was associated with increased maternal knowledge and compliance with health recommendations (Kumar et al., 2020).

In Indonesia, improving the quality of postpartum care is part of the national agenda for maternal and child health. Data from the Ministry of Health shows that although the coverage of postpartum visits is relatively high, the quality of education received by mothers still varies between regions and health facilities (Kemenkes RI, 2022; Kemenkes RI, 2023). Several local studies report that postpartum mothers often do not fully understand the danger signs of postpartum complications, proper breastfeeding techniques, and postpartum self-care,

indicating gaps in the education process (Sari et al., 2018; Lestari & Wulandari, 2021). This situation indicates that the presence of healthcare workers alone is insufficient; the quality of the educator role played becomes a determining factor.

From the perspective of health behavior theory, the Health Belief Model (HBM) explains that knowledge influences perceptions of vulnerability and severity, which in turn shape health intentions and behaviors (Glanz et al., 2019). In the context of postpartum care, mothers with adequate knowledge tend to be more alert to danger signs, more compliant with care recommendations, and more proactive in seeking help. The role of effective educators can strengthen these components of the HBM by providing clear, convincing, and culturally relevant information.

Although there is considerable evidence regarding the importance of postpartum education, there are still research gaps that need to be further explored. First, some studies focus more on clinical outcomes (e.g., breastfeeding success or reduction in complications), while the specific relationship between the role of educators and the level of knowledge of postpartum mothers has not been systematically evaluated, especially in primary health care services. Second, Indonesia's diverse social, cultural, and resource contexts require a more contextual understanding of how the role of educators is carried out and perceived by postpartum mothers. Third, variations in education methods (face-to-face, print media, digital) and the communication style of health workers have the potential to affect the effectiveness of education, but are rarely analyzed in an integrated manner.

The urgency of this topic is further reinforced by the fact that the postpartum period is a "window of opportunity" for educational interventions that have a long-term impact. Effective education during this period not only increases immediate knowledge but also shapes sustainable family health practices. UNICEF emphasizes that strengthening the role of health workers as communicators and educators is a key strategy for improving the quality of care for mothers and babies in the first 1,000 days of life (UNICEF, 2021). In line with this, Indonesia's national policy places midwives at the forefront of maternal services, including as the primary educators during the postpartum period (Indonesian Ministry of Health, 2022).

Based on this description, this study aims to analyze the relationship between the role of educators and the level of knowledge of mothers during the postpartum period. This study is expected to contribute scientifically to understanding the extent to which the role of health worker educators influences the knowledge of postpartum mothers, as well as to provide a basis for strengthening educational strategies in midwifery practice and maternal health services in Indonesia.

2. RESEARCH METHOD

This study is a quantitative study with an analytical observational approach, which aims to analyze the relationship between the role of health worker educators and the level of knowledge of mothers in the postpartum period. A quantitative approach was chosen because the study focuses on measuring variables objectively and analyzing the relationship between variables using statistical methods.

The research design used was cross-sectional, in which the measurement of independent and dependent variables was conducted at the same time. This design was considered the most appropriate for identifying the relationship between the role of educators and the level of knowledge of postpartum mothers without providing specific interventions, and was in accordance with the conditions of the data collected in a single period of time.

The research was conducted at health facilities where postpartum mothers received postpartum care (adjusted to the research location), considering the sufficient number of postpartum mothers, ease of access to respondents, and support from health workers in conducting the research. The research period included the preparation of instruments, data collection, data processing, analysis, and reporting of research results.

The population in this study was all postpartum mothers who were registered and received postpartum care at the research location during the data collection period. The research sample consists of postpartum mothers who meet the inclusion and exclusion criteria. The inclusion criteria include postpartum mothers who are in the postpartum period (0–42 days), can communicate well, and are willing to be respondents. The exclusion criteria include postpartum mothers with severe medical conditions or complications that hinder the questionnaire completion process.

The sample size was determined using purposive sampling, whereby all postpartum mothers who met the inclusion criteria during the study period were included as respondents. This technique was chosen because the population size was relatively limited and the researchers wanted to obtain a comprehensive picture of the relationship between variables in the target population.

The independent variable in this study was the role of health workers as educators, while the dependent variable was the level of knowledge of postpartum mothers. The role of educators was measured based on the perceptions of postpartum mothers regarding the role of health workers in providing education, including aspects of information delivery, clarity of material, opportunities to ask questions, use of media, and communicative attitude. The level

of knowledge of postpartum mothers includes understanding of postpartum self-care, signs of postpartum danger, newborn care, and breastfeeding practices.

Data collection was conducted using a structured questionnaire consisting of two parts, namely a questionnaire on the role of educators and a questionnaire on the level of knowledge of postpartum mothers. The questionnaire was filled out directly by the respondents with the assistance of researchers when necessary to ensure understanding of the questions. The scores from each questionnaire were then categorized according to predetermined criteria (e.g., poor, adequate, and good).

The collected data were analyzed in stages. Univariate analysis was used to describe the characteristics of the respondents and the distribution of the role of educators and the level of knowledge of postpartum mothers in the form of frequencies and percentages. Next, bivariate analysis was performed to determine the relationship between the role of educators and the level of knowledge of postpartum mothers.

Because the variables of educator role and knowledge level were generally categorical or ordinal data, the relationship analysis was performed using the Chi-Square test. If there were cells with an expected count of less than 5, Fisher's Exact test was used as an alternative. If the data was ordinal and met certain assumptions, the analysis could be continued using Spearman's Rank correlation test to see the direction and strength of the relationship. A p-value < 0.05 was set as the statistical significance threshold.

The entire research process was carried out in accordance with the principles of health research ethics. Respondents were given an explanation of the objectives, benefits, and procedures of the research and were asked to provide written consent (informed consent). The confidentiality of the respondents' identities was maintained, and the data obtained was used solely for research purposes.

With this research method, it is hoped that a clear picture of the relationship between the role of health educators and the level of knowledge of mothers during the postpartum period can be obtained, so that the research results can be used as a basis for strengthening the educational role of health workers in midwifery practice and improving the quality of postpartum care.

3. RESULTS AND DISCUSSION

Table 1. Demographic data

	Var	n	F (%)
Age	< 20 years old	1	3.3
	20-35 years old	24	80.0
	>35 years old	5	16.7
Education	Elementary school	0	0
	Junior high school	1	3.3
	High School	14	46.7
	College/university	15	50.0
Employment	Housewife	14	46.7
	Teacher	1	3.3
	Private employee	10	33.3
Parity	Government employee	5	16.7
	1	10	33.3
	2	12	40.0
	3	6	20.0
Delivery method	4	2	6.7
	Standard	23	76.7
Educator role	SC	7	23.3
	Poor	0	0
	Fair	20	66.7
Mothers' knowledge	Good	10	33.3
	Poor	12	40
	Fair	14	46.7
	Good	4	13.3
Total		30	100

(source: primary data, 2025)

This study involved 30 postpartum mothers as respondents. Respondent characteristics included age, education level, occupation, parity, delivery method, educator role, and level of knowledge during the postpartum period.

Based on age group, most respondents were in the 20–35 age range, namely 24 people (80.0%), which is the ideal reproductive age. There were 5 respondents (16.7%) aged >35 years, while only 1 respondent (3.3%) was aged <20 years. This distribution shows that the majority of postpartum mothers were in the age group that was biologically relatively ready to undergo the postpartum period.

In terms of education level, half of the respondents had a college education, namely 15 people (50.0%), followed by 14 people (46.7%) with a high school education. Only one respondent (3.3%) had a junior high school education, and there were no respondents with an elementary school education. The high level of education among respondents indicates a fairly good potential for health literacy, although this is not yet fully reflected in the level of postpartum knowledge.

Based on employment status, almost half of the respondents were housewives, namely 14 people (46.7%). Respondents who worked as private employees numbered 10 (33.3%), civil servants numbered 5 (16.7%), and teachers numbered 1 (3.3%). This variation in employment reflects diverse socioeconomic backgrounds, which can affect mothers' access to information and experiences in receiving health education.

The parity characteristics show that most respondents had a parity of 2, namely 12 people (40.0%), followed by a parity of 1 for 10 people (33.3%), a parity of 3 for 6 people (20.0%), and a parity of 4 for 2 people (6.7%). This indicates that the majority of postpartum mothers have had previous childbirth experiences, which may influence their level of knowledge and preparedness for the postpartum period.

Based on the method of delivery, most respondents gave birth normally, namely 23 people (76.7%), while 7 people (23.3%) underwent cesarean section. This difference in delivery methods can affect the educational needs and experiences of mothers during the postpartum period.

The Role of Educators and the Knowledge Level of Postpartum Mothers

The assessment of the role of health workers as educators showed that the majority of respondents rated the role of educators as adequate, namely 20 people (66.7%), while 10 people (33.3%) rated the role of educators as good. No respondents rated the role of educators as poor. These findings indicate that, in general, health workers have carried out their educational functions, although the quality and intensity can still be improved.

Meanwhile, the distribution of knowledge levels among postpartum mothers shows that almost half of the respondents were in the adequate knowledge category, namely 14 people (46.7%). Respondents with poor knowledge numbered 12 people (40.0%), while only 4 people (13.3%) had good knowledge. These results indicate that although the role of educators is considered adequate to good, the level of knowledge of postpartum mothers is still dominated by the insufficient and adequate categories.

Table 2. Statistical Analysis

Independent variable	N	P Value	r	Dependent variable
Educator role	30	0.125	0.286	Mothers' knowledge
<i>Spearman's Rho</i>				

*significant

(source: primary data, 2025)

To determine the relationship between the role of health educators and the level of knowledge of mothers during the postpartum period, a bivariate analysis was performed using the Spearman Rho correlation test. This test was chosen because both variables are ordinal and do not require a normal data distribution.

The analysis results showed a p-value of 0.125 ($p > 0.05$) with a correlation coefficient of $r = 0.286$. A p-value greater than 0.05 indicates that there is no statistically significant relationship between the role of educators and the level of knowledge of postpartum mothers. Thus, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_1) is rejected.

Although the relationship is not statistically significant, the positive correlation coefficient value ($r = 0.286$) indicates a weak positive relationship, which means that the better the role of the educator, the higher the level of knowledge of postpartum mothers, but this relationship is not strong enough to be considered statistically significant.

These results indicate that the level of knowledge of postpartum mothers is not only influenced by the role of health educators, but also by other factors such as education level, previous childbirth experience, delivery method, access to information from other media, and family support. Therefore, increasing the knowledge of postpartum mothers requires a more comprehensive approach and does not only depend on the role of educators in health services.

Discussion

This study found that there was no statistically significant relationship between the role of health worker educators and the level of knowledge of mothers in the postpartum period ($p = 0.125$), although the direction of the relationship showed a weak positive trend ($r = 0.286$). This means that the better the role of educators as perceived by mothers, the more likely it is that the knowledge of postpartum mothers will increase, but the strength of the relationship is not yet sufficient to be declared significant. This finding is important because it confirms that increasing the knowledge of postpartum mothers is a multidimensional process that does not only depend on one factor, namely the role of educators, but is influenced by individual contexts, service systems, and other sources of information outside of health services.

The insignificance of this relationship can be understood through the characteristics of the respondents and the context of postpartum services. The majority of respondents were of ideal reproductive age and had a medium to high level of education. In groups with relatively good educational literacy, mothers tended to obtain health information from various sources—such as family, digital media, and community—so that the contribution of education from health workers could be "distributed" and did not appear statistically dominant. A study by McCarthy et al. (2018) shows that in populations with broad access to information, the influence of formal

education from health workers on knowledge can be reduced by massive exposure to non-formal information, including social media.

From the perspective of adult learning theory, the effectiveness of education is greatly influenced by the relevance of the material, readiness to learn, and previous experience (Knowles et al., 2015). Multiparous postpartum mothers—who were quite numerous in this study—had previous experiences of childbirth and postpartum care, so that some of their knowledge was formed from experience, not solely from the education provided by health workers during their current postpartum visits. This is in line with the findings of Kronborg et al. (2016), who stated that previous experience can be a strong determinant of knowledge and postpartum care practices, regardless of the intensity of formal education received.

The findings of this study differ from several studies that report a significant relationship between the role of educators and mothers' knowledge. For example, studies by O'Connor et al. (2019) and Kumar et al. (2020) found that structured and repeated postpartum counseling was strongly associated with an increase in mothers' knowledge about self-care and infant care. This difference in results is likely due to variations in the quality and intensity of education. In those studies, education was conducted using standardized modules, adequate duration, and continuous monitoring. Meanwhile, in routine service practices, postpartum education is often brief, focused on core information, and limited by the workload of health workers—so that its impact on knowledge is not always optimal (Renfrew et al., 2018).

On the other hand, the results of this study are in line with reports stating that healthcare worker education alone is not always sufficient to significantly improve knowledge without systemic support. Tadesse et al. (2021) showed that the quality of communication, delivery methods, and use of media greatly determine the effectiveness of postpartum education. One-way education, without ensuring mothers' understanding, tends to result in minimal knowledge improvement. This underscores the importance of a two-way communication approach and teach-back to ensure that messages are conveyed properly.

Clinically, the postpartum period is a time of intense physical and emotional adaptation. Mothers face fatigue, hormonal changes, and the demands of caring for a baby, which can affect their cognitive capacity to absorb information. The literature shows that postpartum emotional conditions—including mild anxiety to depression—can reduce the ability to process new information (Giallo et al., 2017). Thus, even though the role of educators was rated as adequate to good, the condition of mothers at the time of receiving education may have influenced learning outcomes and explained why the measured relationship was not significant.

From a health behavior theory perspective, the Health Belief Model (HBM) emphasizes that knowledge is one of the initial components that influence behavior, but not the only one. Perceived benefits, barriers, cues to action, and self-efficacy also play important roles (Glanz et al., 2019). The role of educators may enhance some of these components, but without continuous reinforcement and environmental support, measurable knowledge gains may be limited. A study by Sharkey et al. (2020) confirms that postpartum educational interventions that combine counseling, family support, and digital reminders are more effective than single education by health workers.

The clinical implication of these findings is the need for a more comprehensive approach to postpartum education. Health workers continue to play a central role as a trusted source of information, but their effectiveness needs to be improved through standardization of materials, use of visual/digital media, and communication strategies that ensure mothers' understanding. Integrating education with family support and the use of health technology (e.g., follow-up messages) can strengthen the impact of education on postpartum mothers' knowledge (WHO, 2022).

Additionally, these findings underscore the importance of evaluating the quality of educators' roles, not just their presence. Training in effective communication, education time management, and utilizing routine care moments as a means of brief but meaningful education can be practical strategies in primary care. The World Health Organization and UNICEF also emphasize that improving the quality of postpartum counseling is a key pillar of improving maternal and infant health, especially in middle-income countries (WHO, 2022; UNICEF, 2021).

Overall, this study shows that although the role of educators tends to be positively associated with postpartum mothers' knowledge, the relationship is not yet statistically significant. These findings add to the evidence that improving postpartum mothers' knowledge requires a multipronged strategy—combining health worker education with family support, media, and a conducive service system. Further research is recommended to evaluate the quality and intensity of education, as well as to test integrated education models to produce stronger and more sustainable knowledge outcomes.

4. CONCLUSION

This study concludes that there is no statistically significant relationship between the role of health worker educators and the level of knowledge of mothers in the postpartum period. However, the positive direction of the relationship indicates that a better role for educators

tends to be followed by an increase in mothers' knowledge, even though the strength of the relationship is still weak. These findings indicate that the level of postpartum mothers' knowledge is influenced by various factors other than the role of educators, such as education level, previous childbirth experience, access to information from the media, and family and environmental support. Therefore, improving postpartum mothers' knowledge requires a more comprehensive and integrated approach, not only relying on education from health workers, but also involving other supporting strategies to strengthen mothers' understanding during the postpartum period.

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