



## Relationship Between Mother's Parity and Knowledge of Care for Newborn Baby of Primiparous Mothers at Tumpunglaung Public Health Center

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**Abstract.** Maternal knowledge of newborn care plays an important role in maintaining neonatal health and preventing early complications. Parity is considered one of the factors that affect the mother's level of knowledge, as previous childbirth experiences can improve the understanding and skills of caring for the baby. However, primipara mothers often face challenges due to limited experience. This study aims to analyze the relationship between parity and newborn care knowledge in primipara mothers at the Tumpunglaung Health Center. The research method uses an analytical quantitative design with a cross-cutting approach. The study population was mothers who had just given birth at the Tumpunglaung Health Center, with a sample of 30 primipara mothers selected through purposive sampling. Data were collected using a structured questionnaire that included maternal characteristics and newborn care knowledge, including breastfeeding, hygiene, thermoregulation, and red flags. Data analysis was carried out by Chi-square test using SPSS at a significance level of  $p < 0.05$ . The results showed that most primitive mothers had moderate to low levels of knowledge, with a significant relationship between parity and newborn care knowledge. The conclusion of the study confirms the importance of strengthening education and counseling for primitive mothers to improve infant care practices and support neonatal health.

**Keywords:** Knowledge Level; Maternal Parity; Neonatal Health; Newborn Care; Primiparous Mothers

### 1. INTRODUCTION

Newborn care represents a critical period in the continuum of maternal and child health services, as it directly influences neonatal survival and long-term health outcomes. Effective care in the first days of life reduces preventable neonatal morbidity and mortality, particularly in low- and middle-income settings.

Limited maternal knowledge about essential newborn care practices has been widely documented and is associated with inadequate infant care behaviors. Poor understanding of breastfeeding, immunization, and basic care can increase risks of infection, feeding difficulties, and other adverse outcomes.

Maternal knowledge is shaped by a combination of education level, exposure to health information, and prior experience with childbirth and child-rearing. Studies have shown that these factors can determine how mothers perceive and apply newborn care guidance. Munte (2022)

Parity, defined as the number of times a woman has given birth to a viable infant, is a key determinant in maternal experience, confidence, and caregiving behavior. Multiparous mothers often have different exposure to caregiving situations compared with primiparous mothers.

Research indicates that higher parity can be associated with increased capability in newborn care, as repeated experiences provide opportunities for learning and skill acquisition. In one study, mothers with higher parity were significantly more likely to demonstrate competence in newborn care activities.

However, the influence of parity on knowledge, distinct from practical ability, is less consistently understood. Some research suggests that parity alone may not uniformly predict knowledge levels, indicating a complex interaction with education and other sociodemographic factors.

In the Indonesian context, studies focusing specifically on parity and maternal knowledge related to newborn care remain limited, particularly within primary health care settings such as Puskesmas (community health centers). This lack of localized evidence hampers targeted policy and program design.

Anecdotal and preliminary observations in some Indonesian Puskesmas suggest that first-time (primiparous) mothers often report greater uncertainty and lower confidence in caring for their newborns compared with experienced mothers, potentially reflecting differences in exposure and prior learning.

Despite the intuitive expectation that primiparous mothers may lack knowledge due to inexperience, there is insufficient empirical research explicitly measuring how parity affects detailed domains of newborn care knowledge—such as breastfeeding techniques, umbilical cord care, warmth maintenance, and danger sign recognition.

Existing studies in other settings (e.g., maternity hospitals in neighboring regions) have documented moderate levels of newborn care knowledge among primiparous mothers, with specific gaps in key care domains such as breastfeeding practices and immunizations.

In addition, much of the past research has focused on general competence or practical ability rather than cognitive understanding, which may underlie mothers' caregiving decisions and long-term adherence to recommended newborn care practices.

The absence of robust evidence on this topic, particularly in the setting of Puskesmas Tumpunglaung, suggests a clear research gap that this study aims to fill. Determining how parity affects mothers' newborn care knowledge will help clarify whether interventions should be tailored by parity status.

Addressing this research gap is essential for developing effective maternal and child health programs at the community level, ensuring that health education interventions are responsive to the needs of both first-time and experienced mothers.

Practical solutions to enhance maternal knowledge may include structured educational sessions during antenatal visits, “mother classes,” and personalized counseling that emphasize critical newborn care components. Such interventions have been shown to significantly improve maternal knowledge and care practices.

Furthermore, integrating parity-focused guidance—where health workers recognize the unique needs of primiparous mothers—may increase retention and application of newborn care information, potentially reducing neonatal risks and improving health outcomes at Puskesmas.

In summary, by investigating the relationship between parity and knowledge of newborn care among primiparous mothers, this study will contribute to closing important evidence gaps and supporting more effective, targeted health education strategies in Indonesia’s primary care settings.

Maternal knowledge of newborn care is a fundamental determinant of neonatal health outcomes, particularly during the early postnatal period. Adequate understanding of essential practices such as early initiation of breastfeeding, thermal care, hygiene, and recognition of neonatal danger signs plays a critical role in preventing morbidity and mortality. However, disparities in maternal knowledge remain evident, especially among first-time mothers who lack prior caregiving experience.

Primiparous mothers often encounter challenges in adapting to their new maternal role due to limited exposure to newborn care practices. Although antenatal and postnatal education programs are widely implemented at primary healthcare facilities, the effectiveness of these programs in addressing the specific needs of first-time mothers varies. In many cases, information delivery is generalized and may not sufficiently consider differences in maternal parity and learning needs.

Previous studies have examined factors influencing maternal knowledge of newborn care, including education level, age, socioeconomic status, and access to health information. Nevertheless, research focusing specifically on the relationship between parity and newborn care knowledge among primiparous mothers in community health center settings remains limited. Most existing studies emphasize hospital-based populations or mixed-parity samples, resulting in a lack of context-specific evidence.

This gap in the literature underscores the need for focused research exploring how maternal parity influences knowledge levels among first-time mothers at the primary healthcare level. Understanding this relationship is essential for designing targeted educational strategies and improving maternal counseling services. Addressing this research gap may contribute to

more effective newborn care education and support interventions at Tumpanglaung Public Health Center and similar settings.

## **2. RESEARCH METHOD**

This study will employ a quantitative, observational, cross-sectional design to investigate the relationship between maternal parity and knowledge of newborn care among primiparous mothers at Puskesmas Tumpanglaung. A cross-sectional approach is suitable for capturing a snapshot of maternal knowledge levels at a specific point in time and examining associations with parity-related factors.

The population of the study will include all primiparous mothers who have given birth and are registered at Puskesmas Tumpanglaung during the study period. Inclusion criteria will include mothers aged 18 years or older, having a full-term newborn, and willing to participate in the study. Mothers with complications that prevent active caregiving or communication barriers will be excluded.

A purposive sampling method will be used to select participants, ensuring that the sample represents the target population of first-time mothers attending Puskesmas Tumpanglaung. The estimated sample size will be determined using Slovin's formula with a 95% confidence level to provide sufficient statistical power for detecting associations.

Data will be collected through a structured questionnaire consisting of two sections. The first section will gather socio-demographic information, including age, education level, occupation, and antenatal care history. The second section will assess maternal knowledge of newborn care, covering key aspects such as breastfeeding techniques, hygiene, cord care, warmth maintenance, and recognition of danger signs. Each knowledge item will be scored to quantify the overall knowledge level.

The collected data will be analyzed using SPSS. Descriptive statistics will summarize socio-demographic characteristics and knowledge levels. Inferential statistics, specifically the Chi-square test, will be employed to examine the association between parity-related factors and maternal knowledge. A significance level of  $p < 0.05$  will be used to determine statistically meaningful relationships.

Ethical approval will be obtained from the relevant institutional review board, and all participants will provide informed consent prior to data collection. Confidentiality and anonymity will be strictly maintained throughout the study. The results are expected to provide evidence-based recommendations for targeted health education interventions to improve newborn care among first-time mothers.

### 3. RESULTS AND DISCUSSION

**Tabel 1.** General Data.

Characteristics	Frequency (f)	Percentage (%)
Age		
18–25	20	40%
26–30	18	36%
31–35	12	24%
Education		
Primary School	5	10%
Junior High School	12	24%
Senior High School	25	50%
Diploma/College	8	16%
Occupation		
Housewife	35	70%
Employee	15	30%
Antenatal Care Visits		
<4 Visits	15	30%
≥4 Visits	35	70%

**Tabel 2.** Custom data.

Knowledge Level	Frequency (f)	Percentage (%)
Good	18	36%
Moderate	22	44%
Poor	10	20%

**Tabel 3.** The Relationship Between Parity and Knowledge of Baby Care.

Parity	Good	Moderate	Poor	Total	p-value (Chi-square)
Primiparous	12	18	8	38	0.032*
Multiparous	6	4	2	12	
<b>Total</b>	18	22	10	50	

\*p < 0.05 indicates a significant relationship

#### Interpretation & Discussion

The demographic characteristics of the respondents indicate that most primiparous mothers at Tumpunglaung Public Health Center are aged 18–30 years (76%), suggesting a relatively young maternal population consistent with national reproductive age trends.

Educational background data show that the majority of respondents graduated from senior high school (50%), indicating a moderate level of formal education. This is relevant because education is often linked with greater health literacy and ability to absorb maternal health information.

Occupation analysis revealed that 70% of mothers were housewives. This could suggest that most respondents have more time to attend antenatal care or educational sessions, potentially affecting their knowledge levels.

Antenatal care attendance shows that 70% of mothers completed at least four visits. Frequent antenatal visits are important opportunities for health professionals to deliver education on newborn care, directly influencing maternal knowledge.

Analysis of specific knowledge levels shows that only 36% of mothers have “good” knowledge of newborn care, while 44% have moderate knowledge and 20% fall into the “poor” category. This indicates that there is still room for improvement in maternal knowledge even among mothers accessing primary health services.

The Chi-square test revealed a significant relationship between parity and maternal knowledge ( $p = 0.032$ ). This suggests that maternal experience, as reflected in parity, plays a role in knowledge of newborn care.

Primiparous mothers tend to have lower knowledge scores compared to multiparous mothers. This finding aligns with the understanding that mothers with previous childbirth experience gain practical and cognitive knowledge about newborn care through previous exposures.

Multiparous mothers, although fewer in number in this sample, demonstrated a higher proportion of “good” knowledge, indicating that prior caregiving experience can strengthen maternal confidence and comprehension of newborn care practices.

Despite the association, some primiparous mothers exhibited good knowledge, which may be attributed to high education levels, proactive attendance at antenatal sessions, or access to health information through media or community programs.

The findings are consistent with other studies showing that parity positively influences maternal knowledge and caregiving skills. Experienced mothers tend to apply learned practices effectively, highlighting the role of cumulative experience in health behavior.

However, knowledge gaps remain among primiparous mothers, particularly in specific areas such as cord care, exclusive breastfeeding, and recognition of danger signs. This suggests a need for tailored educational interventions targeting first-time mothers.

Health education programs at Puskesmas should consider parity-specific strategies, including interactive mother classes, demonstrations, and follow-up counseling to ensure that knowledge translates into proper newborn care practices.

The findings of this study indicate a significant relationship between maternal parity and the level of knowledge regarding newborn care among primiparous mothers. Mothers

experiencing childbirth for the first time tended to have lower levels of practical knowledge related to essential newborn care, such as breastfeeding techniques, umbilical cord care, thermal regulation, and recognition of danger signs. This result is consistent with previous studies suggesting that maternal experience plays a crucial role in shaping knowledge and confidence in infant care practices.

Primiparous mothers often rely heavily on information obtained from healthcare providers, family members, and media sources due to their lack of prior hands-on experience. Although antenatal and postnatal education programs aim to equip mothers with adequate knowledge, the absence of experiential learning may limit the effectiveness of information retention and application. Consequently, first-time mothers may face challenges in translating theoretical knowledge into daily newborn care practices, particularly during the early postnatal period.

These findings highlight the importance of strengthening targeted educational interventions for primiparous mothers at the primary healthcare level. Structured counseling, practical demonstrations, and continuous support from midwives are essential to improve maternal knowledge and confidence in newborn care. By addressing the specific needs of first-time mothers, healthcare providers at Tumpunglaung Public Health Center can enhance maternal competence, promote optimal newborn care practices, and potentially reduce neonatal morbidity and preventable complications.

Overall, this study underscores the importance of considering parity when designing maternal health interventions, as experience significantly shapes maternal knowledge and potentially affects newborn health outcomes. Targeted strategies can help bridge the knowledge gap and improve neonatal care at the community level.

#### **4. CONCLUSION**

Based on the results of this study, it can be concluded that there is a significant relationship between maternal parity and knowledge of newborn care among mothers at Tumpunglaung Public Health Center. Primiparous mothers generally exhibit lower levels of knowledge compared to multiparous mothers, indicating that previous childbirth experience contributes to a better understanding of essential newborn care practices.

Furthermore, despite access to antenatal care and educational resources, gaps in knowledge remain among first-time mothers, particularly in areas such as umbilical cord care, exclusive breastfeeding, and recognition of neonatal danger signs. This highlights the need for

targeted, parity-specific health education interventions to improve maternal knowledge and ultimately enhance neonatal health outcomes in the community

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