

Parental Knowledge and Practices Related to Toilet Training Readiness among Toddlers Aged 1–3 Years

Sa'adah

Puskesmas Ngluyu

Email: saadah@gmail.com

ABSTRACT

Toilet training is a crucial developmental milestone for toddlers, yet many parents lack adequate knowledge and preparedness to support this process effectively. This study aimed to analyze the relationship between parental knowledge and toilet training readiness among toddlers aged 1–3 years. This research used a quantitative observational design with a cross-sectional approach. The population consisted of 140 parents of toddlers, from which 35 respondents were selected using simple random sampling. Data were collected through structured questionnaires assessing parental knowledge and children's readiness indicators. Chi-square analysis at $\alpha = 0.05$ was used to evaluate the association between variables. The results showed that 22 respondents (62.9%) had low knowledge levels, and 24 toddlers (68.6%) were categorized as not yet ready for toilet training. Statistical analysis revealed a significant relationship between parental knowledge and toilet training readiness ($p = 0.001$). The study concludes that adequate parental knowledge contributes to better readiness and toilet training outcomes among toddlers.

Keywords: behavior, parental knowledge, readiness, toddlers, toilet training

BACKGROUND

Toilet training is a developmental process that enables children to gain control over urination and defecation, typically emerging between 18 and 36 months of age (Jacob et al., 2016). Early acquisition of toileting skills is essential because it contributes to children's autonomy, emotional stability, and hygiene practices (Rejeki et al., 2019). However, studies show that many parents still exhibit low levels of knowledge regarding the appropriate timing, methods, and readiness cues for toilet training, which can delay the child's success (Harahap et al., 2021).

Globally, the World Health Organization (2020) reported that only 58% of parents successfully train their children between ages 18–36 months, while the remaining 42% train their children later, resulting in delayed independence. In Indonesia, national data indicate that a large proportion of toddlers experience difficulties with toileting control, with up to 75% not achieving expected milestones (Kameliawati et al., 2020). Parental readiness including knowledge, motivation, and attitudes plays a key role in ensuring successful toilet training outcomes (Syamrotul, 2015).

Local observations have shown that many parents continue to use diapers excessively and lack adequate information about developmental readiness indicators. Preliminary interviews with 10 parents indicated that 6 parents (60%) were unaware of recommended toilet training techniques, and their children were still heavily dependent on diapers. According to previous findings, parents with higher knowledge levels demonstrate better practices in supporting toilet training, which in turn improves children's developmental readiness (Viendyasari, 2019).

Parental knowledge shapes decision-making and behavioral practices in daily caregiving. Therefore, understanding the influence of parental knowledge on toilet training readiness is critical for designing effective educational interventions (Hernanta et al., 2017). This inspired the researcher to examine the relationship between parental knowledge and toilet training readiness among toddlers.

METHODS

This study employed an observational quantitative research design using a cross-sectional approach, which enables researchers to measure all variables simultaneously at a single point in time. Such a design is frequently chosen in public health and behavioral research because it provides a snapshot of relationships between variables without requiring long-term follow-up (Creswell & Creswell, 2018). By collecting data at one moment, the researchers were able to assess existing levels of parental knowledge regarding toilet training as well as toddlers' readiness, making it suitable for identifying potential associations. Although cross-sectional studies cannot establish causality, they are highly effective for exploring correlations and informing future longitudinal investigations.

The population in this study consisted of 140 parents who had toddlers aged 1–3 years living. This age range was selected because it represents a critical developmental stage when children typically begin demonstrating signs of toilet training readiness. From this population, the researchers used a simple random sampling technique to select 35 respondents. Simple random sampling was chosen to ensure that each parent in the population had an equal opportunity of being included in the study, thus minimizing selection bias. A sample size of 35 participants was considered adequate to describe basic characteristics and identify significant associations within the selected population.

The key variables examined in the study included parental knowledge as the independent variable and toddlers' toilet training readiness as the dependent variable. Parental knowledge encompasses understanding of appropriate timing to begin toilet training, recognizing readiness cues, methods that support successful training, and knowing factors that may influence children's progress. Meanwhile, children's readiness refers to their physical, cognitive, and emotional preparedness to start toilet training. Focusing on these variables provides insight into whether parents' level of understanding plays a meaningful role in preparing toddlers for toilet training.

Data were collected using a structured questionnaire adapted from previously validated instruments related to toilet training knowledge and readiness (Wahyu et al., 2014). The use of a structured questionnaire allowed the researchers to systematically gather standardized information from all participants. The knowledge section included items that assessed parents' awareness of signs that indicate readiness, recommended practices, and potential challenges. On the other hand, the children's readiness component evaluated developmental indicators such as motor skills, communication abilities, and emotional stability. This dual structure ensured that both parental and child factors were captured comprehensively.

To ensure validity and reliability, the questionnaire used in this study was based on established research, increasing confidence that it measured the intended constructs accurately. Parents responded to items in a consistent format, which helped reduce subjective interpretation and enhanced the comparability of results across respondents. Additionally, the structure of the instrument allowed for clear scoring of both knowledge and readiness, making it suitable for quantitative analysis. By adopting previously validated tools, the study maintained methodological rigor and aligned with best practices in behavioral and developmental research.

For statistical analysis, the researchers applied the Chi-square test to examine the association between parental knowledge and toddlers' readiness for toilet training. The Chi-square test is appropriate for categorical variables and is widely used to assess whether differences in proportions between groups are statistically significant. A significance level of $\alpha = 0.05$ was used as the threshold for determining meaningful relationships. If the p-value obtained from the test was less than 0.05, it indicated that the association between parental knowledge and toddler readiness was statistically significant. This analytical approach allowed the study to provide empirical evidence regarding the influence of parental understanding on developmental outcomes in early childhood.

RESULTS

Table 1 presents the distribution of parental knowledge levels regarding toilet training among the 35 respondents who participated in the study. The knowledge levels categorized as high, moderate, and low were evaluated using a structured questionnaire adapted from validated sources. This table provides an overview of how well parents understand the proper timing, readiness signals, and effective strategies for toilet training.

Table 1. Distribution of Parental Knowledge Levels

Knowledge Level	Frequency	Percentage (%)
High	6	17.1
Moderate	7	20.0
Low	22	62.9
Total	35	100

As shown in Table 1, most parents (62.9%) had low levels of knowledge regarding toilet training. Only 17.1% demonstrated high knowledge, suggesting that a large proportion of parents may be insufficiently informed about recognizing readiness cues or employing effective toilet training methods. This highlights the need for enhanced educational support for parents in the community.

Table 2 displays the distribution of toilet training readiness among toddlers aged 1-3 years. Readiness was assessed based on physical, cognitive, and emotional indicators commonly used in early childhood development assessments. The table highlights the proportion of toddlers who are developmentally ready to begin toilet training compared with those who are not yet prepared.

Table 2. Toilet Training Readiness Among Toddlers

Readiness Category	Frequency	Percentage (%)
Ready	11	31.4
Not Ready	24	68.6
Total	35	100

Table 2 indicates that only 31.4% of toddlers were categorized as ready for toilet training, while the majority (68.6%) were not yet ready. This imbalance may reflect developmental variability among toddlers, but it may also be associated with the low level of parental knowledge observed in Table 1. When parents lack adequate understanding, they may be less capable of guiding or identifying developmental readiness in their children.

Table 3 summarizes the results of the Chi-square test used to examine the relationship between parental knowledge and toddler readiness. The comparison between high moderate and low

knowledge categories, along with the corresponding readiness outcomes, is shown clearly, including the p-value indicating statistical significance.

Table 3. Relationship Between Parental Knowledge and Toddler Readiness

Knowledge	Ready	Not Ready	p-value
High–Moderate	10	3	0.001
Low	1	21	

Chi-square test shows $p = 0.001 < 0.05$, indicating a significant relationship.

Table 3 provides evidence of a statistically significant relationship between parental knowledge and toddler readiness. Toddlers with parents in the high–moderate knowledge group showed substantially greater readiness (10 out of 13) compared to those whose parents had low knowledge (1 out of 22). The Chi-square test yielded a p-value of 0.001, confirming that the association is highly significant. These findings suggest that improving parental knowledge could play a crucial role in supporting toddlers' successful progression toward toilet training.

DISCUSSION

The results of this study indicate that the majority of parents possessed low levels of knowledge regarding toilet training, which has important implications for early childhood development. Low knowledge may reflect limited access to health education, inadequate exposure to childcare information, or misconceptions passed through informal sources. Hernanta et al. (2017) similarly reported that parental education level is a major predictor of understanding toileting practices. When parents lack sufficient knowledge, they may overlook or misinterpret essential signs of readiness, resulting in delayed initiation or reliance on ineffective strategies. This situation can prolong the toilet training process and potentially create unnecessary stress for both parents and children.

Furthermore, the high proportion of toddlers classified as “not ready” in this study 68.6% suggests that readiness for toilet training is not merely a developmental milestone that occurs naturally but one that requires appropriate stimulation and support. Kameliawati et al. (2020) found comparable results, emphasizing that children achieve toileting independence more successfully when guided by caregivers who possess accurate information about developmental cues. Without such guidance, toddlers may fail to develop the physical coordination, language skills, or emotional regulation needed to engage effectively in toilet training.

Children’s readiness also depends heavily on their cognitive and emotional preparedness, in addition to physical development. According to Ernawati (2021), readiness emerges through consistent parental involvement that fosters understanding, confidence, and routine. Parents with limited knowledge may not provide the structured practices needed to help toddlers recognize bodily signals or engage in toileting behaviors. As a result, children may exhibit resistance, confusion, or fear during the training process, further delaying their progress. This reinforces the importance of equipping parents with accurate developmental information.

The findings also demonstrate a significant association between parental knowledge and toddlers’ toilet training readiness, confirming that parental understanding plays a crucial role in shaping children’s developmental outcomes. The strong relationship observed in this study aligns with findings from Mail et al. (2018), who observed that knowledgeable parents tend to apply appropriate methods, establish consistent routines, and avoid punitive or coercive practices. These

behaviors contribute to a positive learning environment that enables children to develop toileting skills more effectively.

Parents with higher levels of knowledge are also more likely to adopt supportive and motivating approaches during the toilet training process. Increased understanding enhances parents' confidence, patience, and ability to interpret their child's needs. This leads to the use of positive reinforcement, clear communication, and age-appropriate expectations all of which improve training outcomes. Moreover, informed parents are better positioned to collaborate with healthcare providers or early childhood educators when challenges arise.

Overall, these findings highlight the critical role of parental knowledge in fostering successful toilet training. Interventions aimed at improving parental understanding such as health education programs, counseling by healthcare workers, and accessible informational materials could significantly enhance toddlers' readiness and reduce training difficulties. By strengthening parents' knowledge base, communities can support healthier developmental trajectories and promote greater independence among young children.

CONCLUSION

There is a significant relationship between parental knowledge and toilet training readiness among toddlers aged 1–3 years. Higher knowledge levels are associated with better readiness indicators in children. It is recommended that health workers intensify parental education programs to promote early and effective toilet training.

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