



## Factors Influencing the Success of Toilet Training in Preschool-Aged Children

Metty Nurherliyany<sup>1</sup>, Ima Sukmawati<sup>1</sup>, Jajuk Kusumawaty<sup>1</sup>, Cindy Nuraplliani<sup>1</sup>

<sup>1</sup>STIKes Muhammadiyah Ciamis, Ciamis, Indonesia

Correspondence author: Metty Nurherliyany

Email: [mettynurherliyany@gmail.com](mailto:mettynurherliyany@gmail.com)

Address : Jl. KH. Ahmad Dahlan No. 20 Ciamis, WestJava 46216 Indonesia

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### ABSTRACT

**Introduction:** Toilet training is defined as the ability to initiate and complete urination and defecation independently. This is an important marker in the normal development of children as it is a challenging process not only for children but also for their families.

**Objective:** The aim of this research is to find out what factors influence the success of toilet training in preschool children in the Karanganyar Village area.

**Methods:** This research method is quantitative. The type of research used is correlational analytics with a cross-sectional approach. The population used in this research were 56 preschool age children in Karanganyar Village, Karangsiswa Kindergarten, Mahardika Kindergarten and Terate PAUD, using total sampling techniques.

**Result:** The results of this study show that based on the chi square test, knowledge and work have a p value of <0.05, while education has a p value of >0.05.

**Conclusion:** The conclusion is that there is an influence of mother's knowledge and work on the success of toilet training and there is no influence of education on the success of toilet training.

**Keywords:** children, growth, preschool, toilet training

### Introduction

Toilet training refers to the process by which a child learns to initiate and control urination and defecation independently. This developmental milestone is crucial as it signifies normal progress in a child's growth and development, presenting challenges not only for the child but also for the family (Netto et al., 2020). The primary objectives of toilet training are to promote personal hygiene, facilitate the child's ability to redress following urination, and foster the development of autonomous skills in managing urination and defecation (Lestari et al., 2020).

According to the World Health Organization (WHO), it is estimated that 5 to 7 million

children worldwide experience nighttime bedwetting, with approximately 15 to 25 percent of these cases occurring in children under the age of 5 years. Data from ASEAN countries indicate that around 2 million children between the ages of 2 and 4 are affected by enuresis. The prevalence of enuresis tends to decrease with age, with 80% of cases occurring at night. In addition, 20% of children who experience bedwetting during the day also exhibit nocturnal enuresis, while 15-20% of those who wet the bed at night may wet during daytime hours as well (Rahayu, 2022).

In Indonesia, the prevalence of bedwetting among children is notable, with approximately 250 million children affected, translating to around 30% of the population. Data from the Household Health Survey conducted by the Medical Research and Development Agency in 2013 revealed that 75 million children faced challenges in controlling urination and bowel movements from infancy through the age of 75 years. Within this context, 12% of children are unable to control urination at the age of 6 years, and the prevalence is even higher, at 39%, in children aged 4 years. Furthermore, at the age of 4 years, 10% of children continue to experience nocturnal bedwetting, while 3% of 5-year-olds are also reported to wet the bed at night (Andriyani & Sumartini, 2020).

During the toilet training phase, children who successfully navigate this stage often develop a sense of safety and confidence. Conversely, those who encounter difficulties may experience feelings of insecurity and self-doubt. Children who are self-assured in their abilities are more likely to succeed in subsequent tasks (Mansur, 2019). If parents do not adequately implement toilet training, the potential repercussions on the child can be significant, including the development of stubbornness, a lack of independence, and the persistence of bedwetting habits. Over time, poor bowel and bladder control can lead to a child becoming challenging to manage, overly dependent, and, critically, at risk for mental health issues such as feelings of alienation and an inability to control urination and defecation (Pusparini & Arifah, 2009).

Bedwetting can elicit concern among parents, as this condition may adversely affect a child's self-esteem, interpersonal relationships, and academic performance (Maghfuroh, 2018). Additionally, bedwetting can impede a child's overall growth and development, potentially leading to both internal and external behavioral issues. Children may grapple with feelings of inferiority, insecurity, and aggression (Tri Ratnaningsih, 2020). Conversely, when a child successfully completes toilet training, they are likely to experience increased confidence and greater control over their bodily functions.

The success of toilet training is influenced by both internal and external factors. Internal factors originate from the child, particularly their physical, psychological, and cognitive attributes. External factors encompass parental influences, including maternal knowledge, education, and employment, as well as various environmental influences. Internal environmental factors consist of family dynamics and relationships, while external factors include societal influences and interactions with peers (Aprilina Sartika, 2018). Understanding these factors is essential for facilitating effective toilet training and promoting healthier developmental outcomes for children.

## **Objective**

The aim of this research is to identify and analyze the factors that influence the success of toilet training in preschool children residing in Karanganyar Village. This study seeks to understand both internal and external elements that contribute to effective toilet training,

providing valuable insights that may assist parents, caregivers, and healthcare professionals in facilitating this critical developmental milestone. By examining these factors, the research aims to improve the overall outcomes of toilet training and enhance the well-being of preschool-aged children in the community.

## Method

The research utilizes a quantitative design with a cross-sectional approach to examine the factors influencing the success of toilet training among preschool-aged children. The study population consists of 56 children attending Karangsiswa Kindergarten, Mahardika Kindergarten, and Terate Early Childhood Education (PAUD) in Karanganyar Village. A total sampling technique was employed, resulting in a sample that encompasses all 56 respondents from this population. Data collection was conducted using a structured questionnaire designed to gather relevant information. For data analysis, both univariate and bivariate analyses were performed, employing the chi-square statistical test to assess relationships and significance among the variables under investigation. This approach enables a comprehensive understanding of the factors affecting toilet training success in this specific demographic.

## Result

Table 1. Frequency distribution of toilet training success

<b>Variables</b>	<b>n</b>	<b>%</b>
<b>Toilet Training</b>		
Good	29	51.8
Enough	18	32.1
Not enough	9	16.1
<b>Mother's knowledge</b>		
Good	35	62.5
Enough	17	30.4
Not enough	4	7.1
<b>Mother's education</b>		
Junior High School	7	12.5
Senior High School	42	75.0
College	7	12.5
<b>Occupation</b>		
Housewife	39	69.6
Work	17	30.4

Based on the presented respondent data, an interpretation of each variable reveals notable insights. In terms of toilet training, 29 children (51.8%) demonstrated successful implementation, while 18 children (32.1%) exhibited adequate performance, and 9 children (16.1%) displayed insufficient results. This indicates that more than half of the children in the sample have effectively completed toilet training, yet a significant proportion (48.2%) still requires attention to enhance their training outcomes. Regarding maternal knowledge, 35 mothers (62.5%) possessed good knowledge about toilet training, 17 mothers (30.4%) had sufficient knowledge, and only 4 mothers (7.1%) were inadequate in this area. This suggests that the majority of mothers are well-informed, which likely positively impacts their children's

success. In terms of maternal education, 7 mothers (12.5%) completed junior high school, 42 mothers (75.0%) attained senior high school education, and 7 mothers (12.5%) held college degrees. The predominance of mothers with higher education may be influential in their understanding of effective toilet training practices. Additionally, regarding occupation, 39 mothers (69.6%) identified as homemakers, while 17 mothers (30.4%) worked outside the home. The dominance of homemakers may provide them with greater availability to engage in supportive toilet training practices.

Table 2. Correlation between variables

Variables	Toilet Training			Total	p-value
	Good	Enough	Not Enough		
<b>Knowledge</b>					
Good	24	11	0	35	0.000
Enough	5	7	5	17	
Not enough	0	0	4	4	
<b>Education</b>					
Junior High School	2	2	3	7	0.220
Senior High School	22	15	5	42	
College	5	1	1	7	
<b>Occupation</b>					
Housewife	25	12	2	39	0.001
Work	6	6	7	17	

The p-value for knowledge is 0.000, indicating a statistically significant correlation with toilet training outcomes. Among the mothers, 24 children (68.6%) whose mothers had good knowledge demonstrated successful toilet training, while 11 children (31.4%) with sufficient knowledge achieved the same. Notably, no children from mothers with good knowledge were categorized as “not enough.” In contrast, among those whose mothers had insufficient knowledge, 4 children (100%) were unable to achieve successful toilet training.

The p-value for education is 0.220, which indicates no statistically significant correlation with toilet training outcomes. The breakdown of results shows that among mothers with junior high school education, 2 children (28.6%) trained well, while 3 children (42.9%) did not. For mothers with senior high school education, 22 children (52.4%) achieved good results, whereas 5 children (11.9%) did not. Similarly, among college-educated mothers, 5 children (71.4%) successfully completed toilet training.

A p-value of 0.001 indicates a strong statistical correlation between occupation and toilet training outcomes. Among housewives, 25 children (64.1%) achieved good results, while only 2 children (5.1%) were classified as “not enough.” Conversely, among working mothers, 6 children (35.3%) demonstrated good toilet training success, with a higher proportion (41.2%) categorized as “not enough.”

## Discussion

The results of this study indicate that the highest frequency of successful toilet training among children was categorized as “good,” with 29 children (51.8%) achieving this outcome.

In this context, successful toilet training was operationalized as the children being able to verbalize their need to urinate (“pee”) to teachers, parents, or familiar family members prior to using the toilet, as well as being able to independently remove and wear their clothing and flush the toilet following urination and defecation. Despite the relatively high success rate, it is important to note that 18 children exhibited “sufficient” success, and 9 children were classified as having “less” success. The observed limitations in success may be attributed to certain factors, such as some children delaying their urination until prompted by their parents, potentially due to feelings of insecurity and embarrassment about expressing their needs in the presence of others. As a result, several children experienced accidents, leading to episodes of involuntary urination while attempting to hold it in. This underscores the importance of fostering an environment that encourages open communication and confidence in expressing physiological needs among children during the toilet training process.

In this study, the success of toilet training was evaluated based on several specific criteria. A child was considered successful in toilet training if they were able to wake up without wetting the bed and to remain dry for several hours during the day, specifically for a minimum of 3 to 4 hours. Furthermore, successful children demonstrated an understanding of their physiological needs by using the term “pee” to communicate their desire to urinate, as well as informing their parents when their pants or diapers were wet or soiled. Additionally, these children were capable of independently flushing the toilet after completing urination or defecation. This criteria reflects a comprehensive definition of toilet training success, encompassing both nighttime dryness and day-to-day independence in managing personal hygiene.

In alignment with the findings of Hamdanesti et al. (2023), as reported in their research titled “Analysis of Parenting Patterns and the Success of Toilet Training in Toddler Age Children (1-3 Years) in the Andalas Community Health Center Work Area,” a significant relationship exists between parental parenting styles and the success of toilet training in toddlers aged 1 to 3 years. The study found a statistical significance with a p-value of  $p = 0.001$ , which is less than the alpha level of  $\alpha = 0.05$ , indicating a robust correlation between the two variables. This evidence underscores the essential role that parenting approaches play in facilitating successful toilet training outcomes among young children within the Andalas Health Center jurisdiction (Hamdanesti et al., 2023).

Based on the data, 35 mothers, representing 62.5%, demonstrated good knowledge regarding toilet training. Maternal knowledge is a critical factor that can significantly influence the speed and effectiveness of completing potty training for their children. Additionally, a mother’s prior experience with potty training can enhance her ability to facilitate this process. Engaging with the child in the potty training experience from an early age, such as by sitting on the potty together, can foster a supportive environment. This approach not only promotes a positive association with toilet training but also encourages independence in the child, ultimately enabling them to manage their toileting needs autonomously. Thus, enhancing maternal knowledge and experience is pivotal for successful toilet training outcomes.

In this study, a total of 42 mothers, representing 75%, had completed their education at the high school level. The level of maternal education significantly impacts the understanding and knowledge gained regarding child development issues, including toilet training. Education facilitates a better comprehension of pediatric developmental milestones and challenges, thereby equipping mothers with the necessary tools to support their children’s growth effectively.

Furthermore, the majority of mothers in this study identified as homemakers, with 39 mothers (69.6%) falling into this category. This demographic advantageously positions housewives to dedicate more time to instructing their children in self-toilet use. In contrast, working mothers may experience constraints in their availability, which can limit the consistency and effectiveness of their involvement in toilet training.

To achieve successful toilet training, it is essential for parents to engage in regular practice with their children. This includes guiding the child to communicate their need to urinate, encouraging direct trips to the bathroom, assisting with the removal and donning of clothing, ensuring the child flushes the toilet independently after use, and promoting proper hand hygiene. In situations where a child struggles with independent bathroom use, it is advisable for parents to accompany them initially, providing support and reassurance before allowing them to navigate the process alone. This gradual approach fosters confidence and competence in children as they learn to manage their toileting needs independently.

Consistent with the findings presented in the research conducted by Dewi (2021) titled "The Relationship between Parenting Patterns and the Success of Toilet Training in Pre-School Age Children in Kendal Jaya Village," it is reported that the success of toilet training is influenced by two primary types of factors. The first category, internal factors, encompasses characteristics and attributes inherent to the child, such as their physical readiness, psychological state, and individual temperament. The second category consists of external factors, specifically those emanating from parental influence, particularly parenting styles. Parenting style refers to the various methods and approaches parents utilize in nurturing, educating, and motivating their children towards achieving developmental milestones, including successful toilet training outcomes. This relationship underscores the significant role that both internal characteristics of the child and the external influence of parenting practices play in facilitating effective toilet training, thereby highlighting the importance of understanding and optimizing these factors to enhance developmental success (Marvia, 2021).

Based on the findings presented in Table 2, there were 24 children who demonstrated both good maternal knowledge and successful toilet training outcomes, a correlation facilitated by the ease of access to information from resources such as smartphones, television, and local health services, which empower mothers to effectively teach their children about toilet training. The chi-square test indicated a significant p-value of 0.000, suggesting that maternal knowledge strongly influences toilet training success. Additionally, the data reveal that the highest number of successful toilet training occurrences, with 25 instances, was among mothers with lower educational attainment, emphasizing that mothers possess varying abilities to absorb information. Although mothers with higher education levels often work outside the home, this can restrict their capacity to effectively monitor their children's progress. In contrast, homemakers typically have more time to dedicate to supervising their children's habits, contributing to better success rates, as indicated by a significant p-value of 0.001 from the chi-square test on maternal occupation. Toilet training represents a crucial milestone in early childhood development, involving complex neurological, muscular, and behavioral mechanisms influenced by various factors. Inadequate training can result in adverse physical and psychological consequences, including diminished autonomy. Parents can utilize their observations of their child's patterns to facilitate effective training, employing methods that prompt bathroom visits multiple times a day. Preschoolers should learn to recognize their bladder fullness and communicate their needs to their parents. Ultimately, encouraging children towards independence in basic needs like toilet training, self-feeding,

and tidying up is essential for fostering autonomy and emotional sensitivity, with the researchers positing that the establishment of small, consistent habits regularly practiced will enhance the likelihood of successful toilet training outcomes.

In alignment with the findings presented by Anwar et al. (2023) in their research on the relationship between parenting patterns, maternal knowledge, and the success of toilet training in children, the study emphasizes that there is a significant correlation between these variables. Specifically, the research indicates that the manner in which parents engage in toilet training, including their strategies and approaches, plays a critical role in encouraging children to meet their own needs, particularly in the context of basic toilet training. By fostering a supportive and informed environment, parents can significantly enhance the likelihood of successful outcomes in their children's toilet training journey (Anwar et al., 2023).

## **Conclusion**

Based on the research conducted on the factors influencing the success of toilet training in preschool children within the Karanganyar Village area, it can be concluded that most mothers possess good knowledge of toilet training, which significantly contributes to successful outcomes in their children's toilet training experiences. While many mothers have attained high educational levels and primarily work as housewives, the study revealed no significant impact of maternal education on toilet training success. In contrast, the employment status of mothers does influence this success, suggesting that those who are homemakers may have more time and opportunities to actively engage in their children's toilet training processes.

To enhance the success of toilet training among preschool children in Karanganyar Village, a few recommendations are suggested. Implementing periodic workshops focused on toilet training techniques can further equip mothers with effective strategies. Additionally, creating support systems for working mothers will help them engage with their children's toilet training despite time constraints. Community awareness campaigns emphasizing the importance of maternal involvement can enrich the knowledge landscape and promote active participation. By focusing on these strategies, the community can foster an environment that cultivates successful toilet training and overall child development, ensuring that all mothers have access to the resources and support they need.

## ***Conflict of interest***

There is no conflict of interest.

## ***Authors' contribution***

Each author contributed equally in all the parts of the research. All authors have critically reviewed and approved the final draft and are responsible for the content and similarity index of the manuscript.

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