

# Analysis of Sanitation Conditions and Hygiene Behavior in the Raudhatul Athfal Environment, Sleman Regency: A Survey Study

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## Abstract

This study aims to analyze sanitation conditions and hygienic behaviors in Raudhatul Athfal (RA) schools in Sleman Regency, Indonesia, to highlight the important role of these factors in supporting children's health and preventing the spread of disease. The relevance of this study is underscored by alarming statistics from the World Health Organization (2020), which show that poor sanitation contributes significantly to preventable childhood diseases. This study used a survey method, data were collected from 15 RA schools through direct observation of sanitation facilities and semi-structured interviews with principals and staff. Descriptive statistical analysis was used to interpret the data and visualize the findings. The findings revealed that while 86.67% of schools reported good water quality and 93.33% kept toilets clean, only 33.33% provided separate toilets for boys and girls. In addition, 66.67% of schools offered child-friendly toilet facilities. In terms of hygiene behavior, 93.33% of schools promoted handwashing education during critical times, but only 73.33% involved students in waste sorting and recycling practices. The study concluded that, although sanitation practices were positive in most RA schools, there were areas for improvement, particularly in gender-sensitive sanitation and waste management. Improving education on waste sorting could further enhance environmental sustainability. This study provides valuable insights for policymakers and educators to strengthen sanitation policies and practices in early childhood education settings. Future studies should investigate the long-term impact of improved sanitation and hygiene education on students' health and academic performance.

**Keywords:** Sanitation Conditions, Hygiene Behavior, Raudhatul Athfal, Early Childhood Education, Health Promotion

## Introduction

Sanitation Conditions and Hygiene Behavior in educational environments, especially in Raudhatul Athfal (RA), play an important role in supporting children's health and preventing the spread of disease. RA as an early childhood education institution has the responsibility to create a healthy and safe environment for children's development. This study aims to analyze the sanitation conditions and hygiene behavior in RA schools in Sleman Regency, which is the first step to improving health standards in educational environments.

According to the World Health Organization (WHO), around 1.5 million children under the age of five die each year from diseases that can be prevented through good sanitation and proper hygiene practices (WHO, 2020). Children exposed to unclean environments are at high risk of experiencing health problems, including diarrhea, respiratory infections, and skin diseases. Thus, good sanitation and proper hygiene behavior are essential to ensure children's health. In Indonesia, although there are various government policies regarding PHBS, their implementation in the field still often faces challenges. A study by Nuryanti et al. (2021) showed that many schools still lack adequate sanitation facilities, which can hinder healthy living behavior among students.

The definition of hygiene behavior includes various behaviors that support health, such as washing hands with soap, using clean toilets, and good waste management. Through this study, researchers will explore the existing sanitation conditions and hygiene behaviors implemented in RA. Using a survey method, data was collected from RA schools in Sleman Regency. This study will provide an in-depth analysis of the relationship between sanitation conditions and clean living behaviors and their impact on children's health.

Several studies have shown that there is a positive relationship between good sanitation conditions and clean living behaviors on children's health (Mason et al., 2017; Ghosh et al., 2019). According to Campbell et al. (2018), an environment that supports healthy behavior will increase the likelihood of individuals adopting a clean lifestyle. Therefore, it is important to assess how existing education and health policies can affect student behavior at school.

The results of this study are expected to provide a clear picture of the sanitation and hygiene behavior situation in the school environment and recommendations for necessary improvements. In addition, this analysis will enrich the literature on sanitation and health in early childhood education, and contribute to the development of better policies in efforts to improve environmental health in schools. By paying attention to sanitation issues and clean and healthy living behaviors, it is expected to create a better learning environment for children, which in turn can support their physical and mental development optimally.

This study highlights the importance of good sanitation and clean living behaviors as a foundation for creating a healthy educational environment. The findings of this study are expected to be the basis for more effective policies and actions in improving children's health in the Raudhatul Athfal school environment in Sleman Regency.

## **Methods**

This study uses a survey method research design to analyze sanitation conditions and hygiene behavior in the Raudhatul Athfal (RA) environment in Sleman Regency. In this study, 15 RA schools were selected as study locations using random sampling techniques, where each member of the population has an equal opportunity to be selected as part of the sample. This technique aims to reduce bias and ensure that the samples taken can represent the population as a whole. The use of random sampling is important in research to produce results that can be generalized to a wider population.

Data were collected through two main approaches: direct observation and interviews. Observations were made to assess the physical sanitation conditions in each school, including sanitation facilities such as toilets, handwashing facilities, and waste disposal systems. Furthermore, semi-structured interviews were conducted with school principals and staff to dig deeper into the hygiene practices implemented, as well as the challenges faced in maintaining sanitation and cleanliness.

After the data was collected, data analysis was carried out using descriptive statistical analysis techniques. This method is used to describe the sanitation conditions in each school as well as the hygiene behaviors observed. The data obtained were processed to provide a clear picture of the prevalence of sanitation facilities that meet standards and hygiene habits carried out by students. The results of this analysis are expected to provide useful insights in formulating recommendations to improve sanitation conditions and hygiene behavior in the Raudhatul Athfal environment.

## **Result**

This study aims to analyze the sanitation conditions and hygiene behavior in 15 Raudhatul Athfal (RA) in Sleman Regency. Data collection was carried out using direct observation methods on sanitation facilities in the school environment and interviews with the principal and teachers to determine the application of hygiene behavior in students. The data obtained were analyzed descriptively, and the results of the analysis were displayed in the form of histogram visualizations to facilitate interpretation and understanding of the distribution of sanitation conditions and hygiene behavior in the school.

### *1. Sanitation Conditions in RA Schools*

Based on the observation results, the sanitation conditions in 15 RA schools vary. The histogram or bar graph below illustrates the percentage of schools that meet the minimum sanitation standards set by the Ministry of Health:

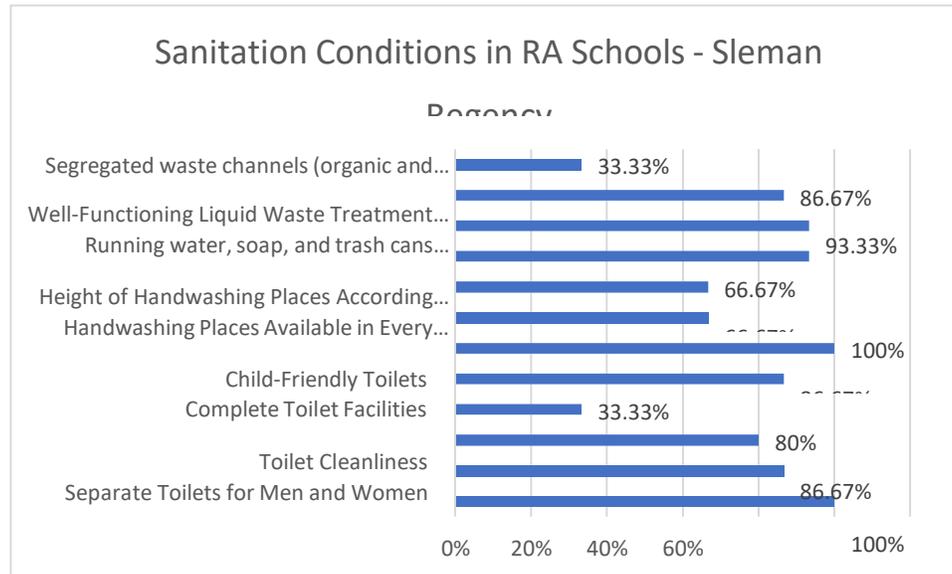


Figure 1. Sanitation Condition in RA Schools – Sleman Regency

The histogram provides a descriptive overview of sanitation conditions and hygiene practices across Raudhatul Athfal (RA) schools in Sleman Regency. All schools surveyed have access to clean water, which is critical for maintaining hygiene and health standards.

A significant majority of the schools (86.67%) reported good water quality, ensuring the water is safe for drinking and other uses, but there is still room for improvement in some institutions. 80% of the schools meet the minimum requirement of providing 15 liters of water per person per day. However, 20% still fall short of this important benchmark, especially during dry seasons when water availability may become more challenging. Only 33.33% of schools have separate toilets for male and female students. This is a critical gap, especially considering privacy and gender inclusivity. A majority of schools (86.67%) maintain clean toilets. Cleanliness standards here imply that the facilities are free from bad odors, dirt, and slippery floors, contributing to overall hygiene. All surveyed schools (100%) have toilets equipped with the necessary amenities such as water, soap, adequate ventilation, and lighting. This ensures that the toilets meet basic health and hygiene needs. About two-thirds (66.67%) of schools provide child-friendly toilet facilities, which are accessible and safe for young children, including those with special needs. However, one-third of the schools still lack such facilities.

Two-thirds (66.67%) of the schools have handwashing stations available in every classroom and other strategic areas like near toilets and playgrounds. This promotes regular hand hygiene among students. Most schools (93.33%) have handwashing stations designed at a height accessible to children, ensuring all students, including those with special needs, can use them effectively. 93.33% of the schools provide complete handwashing facilities, which include running water, soap, and nearby trash cans. This high percentage reflects the schools' commitment to maintaining good hygiene practices.

A majority of schools (86.67%) have effective liquid waste management systems, which are crucial for preventing environmental contamination and promoting a healthy school environment. 86.67% of the schools maintain wastewater channels that are not clogged and do not emit unpleasant odors, contributing to a cleaner school environment. Only 33.33% of the schools provide separated trash cans (for organic and non-organic waste) in every classroom, toilet, and public area. This indicates a need for improvement in waste segregation practices across most schools.

In summary, while most schools demonstrate strong compliance with basic sanitation and hygiene standards, such as clean water availability, toilet cleanliness, and well-maintained liquid waste systems, there are notable gaps in areas like the provision of separate toilets for

boys and girls, and proper waste segregation practices. Addressing these gaps will help improve the overall sanitation and hygiene environment in these schools.

## 2. Hygiene Behavior

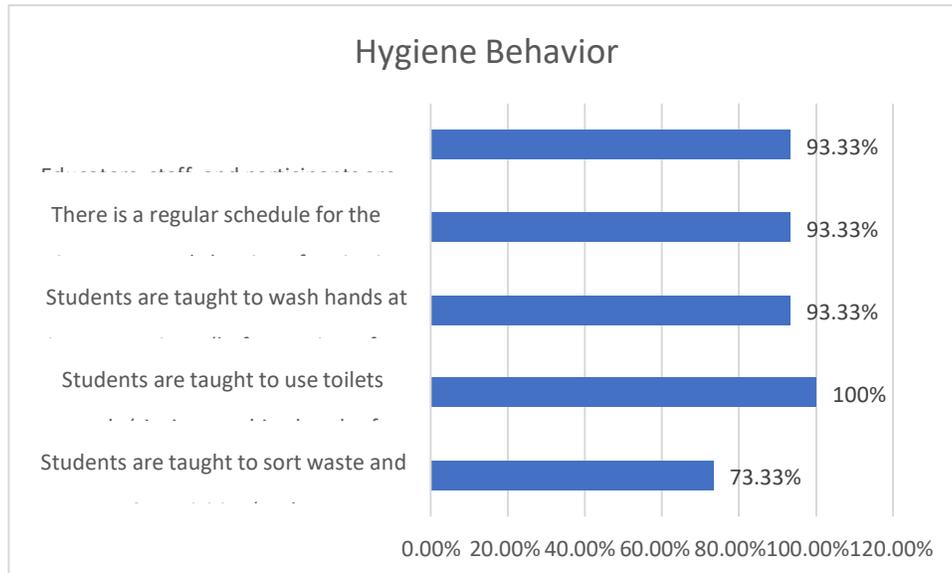


Figure 2. Hygiene Behavior in RA Schools – Sleman Regency

The histogram illustrates hygiene behavior in Raudhatul Athfal (RA) schools in Sleman Regency, highlighting the involvement of educators, staff, and students in maintaining cleanliness and hygiene practices. The majority (93.33%) of schools have educators, staff, and students who are actively involved in maintaining the cleanliness of the school environment and ensuring proper sanitation practices. This high level of participation reflects a strong commitment to shared responsibility in maintaining hygiene.

Similarly, 93.33% of schools have implemented a routine schedule for the maintenance and cleaning of sanitation facilities, ensuring that the area remains functional and hygienic. Routine maintenance is essential in preventing the spread of disease and promoting a clean learning environment. In 93.33% of schools, students were educated on the importance of washing their hands at key times, such as before eating, after playing, and after using the toilet. This high percentage indicates that handwashing is a fundamental hygiene practice that is reinforced in most schools.

All schools (100%) taught students how to use toilets correctly, including flushing properly, washing hands after use, and keeping the facility clean. These are important practices to prevent the spread of germs and ensure that students contribute to maintaining hygienic toilet facilities. While most schools (73.33%) taught students to sort waste and engage in 3R activities (Reduce, Reuse, Recycle), there is still room for improvement as almost a quarter of schools have not fully implemented these practices. Waste management and recycling play a vital role in environmental sustainability and should be encouraged in all schools.

In summary, most Raudhatul Athfal schools in Sleman Regency have strong hygienic behavior practices, with active participation from educators, staff, and students in maintaining cleanliness and sanitation. However, efforts to teach waste sorting and recycling activities can be further expanded to ensure that environmental awareness and sustainability practices are fully integrated into the school culture.

## Discussion

The present study provides a comprehensive analysis of sanitation conditions and hygiene behavior in 15 Raudhatul Athfal (RA) schools in Sleman Regency. The findings reveal

a generally positive picture regarding sanitation facilities and hygiene practices, but they also highlight significant areas for improvement.

### *1. Sanitation Conditions in RA Schools*

The results indicate that all surveyed schools have access to clean water, which is essential for maintaining hygiene. This finding is consistent with previous studies that underscore the importance of clean water access in educational settings (WHO, 2019). However, while 86.67% of the schools reported good water quality, 20% fell short of the recommended 15 liters per person per day, especially in dry seasons. This discrepancy aligns with findings by Patil et al. (2010), which emphasize the critical role of sufficient water supply in supporting hygienic practices.

The absence of separate toilets for male and female students in 66.67% of schools presents a significant gap. This lack raises concerns about privacy and gender inclusivity, reflecting findings from a study by Sadeghi et al. (2018), which highlights the importance of gender-sensitive sanitation facilities in educational environments. Furthermore, the availability of child-friendly toilet facilities is crucial for ensuring that all students, including those with special needs, can access sanitation services safely (Cohen et al., 2019). The reported 66.67% provision rate for such facilities points to an opportunity for further development in this area.

In terms of waste management, the results show that while a majority of schools have effective liquid waste management systems, only 33.33% provide separated trash cans. This finding suggests a need for increased efforts in waste segregation practices, supporting the recommendations of Gupta et al. (2020) for comprehensive waste management strategies in schools.

### *2. Hygiene Behavior*

The findings regarding hygiene behavior are notably positive, with 93.33% of schools promoting active participation from educators, staff, and students in maintaining cleanliness. This aligns with previous research demonstrating that community involvement significantly enhances hygiene practices in schools (Fowler et al., 2020). Furthermore, the implementation of routine maintenance schedules is essential in preventing disease transmission and promoting a clean learning environment, corroborating studies that advocate for regular sanitation facility maintenance (Prüss-Ustün et al., 2019).

The education of students on the importance of handwashing at critical times is particularly encouraging, as it reflects a foundational aspect of hygiene promotion. The high percentage of schools (93.33%) teaching proper toilet use also reinforces the necessity of behavioral interventions to reduce the spread of germs (World Bank, 2021). However, while 73.33% of schools taught students about waste sorting and recycling, the remaining 26.67% indicates a critical area for growth. Expanding education on waste management and recycling could not only enhance hygiene behavior but also promote environmental sustainability, as highlighted by research on the integration of environmental education in school curricula (Cox et al., 2020).

### *3. Implications and Future Directions*

The findings of this study have several implications for policy and practice in early childhood education settings. Ensuring that all RA schools meet minimum sanitation standards, particularly concerning gender-sensitive facilities and waste segregation, is crucial for enhancing the overall hygiene environment. Addressing these gaps could contribute to better health outcomes for students and create a more inclusive school environment.

Future research should focus on longitudinal studies that track the impacts of improved sanitation facilities and hygiene education on student health and academic performance. Additionally, investigations into the barriers preventing schools from achieving full compliance with sanitation standards could provide valuable insights for policymakers and educators.

In summary, while the sanitation conditions and hygiene behavior in RA schools in Sleman Regency show promising results, there are essential areas for improvement that warrant further attention. By addressing these gaps, stakeholders can enhance the health and well-

being of students, fostering a safer and more conducive learning environment.

## Conclusion

This study provides important insights into sanitation conditions and hygiene behaviors in 15 Raudhatul Athfal (RA) in Sleman Regency. Overall, the results show that most schools meet basic sanitation standards, such as access to clean water and clean toilets, which are essential for students' health and well-being. However, there are several areas that need improvement, including the provision of separate toilets for male and female students, as well as less than optimal waste separation practices.

The active participation of educators, staff, and students in maintaining cleanliness and sanitation facilities demonstrates a strong commitment to hygiene behaviors. Education on proper handwashing practices and proper toilet use has been implemented in all schools studied, which is a positive step in increasing hygiene awareness among students. However, there is an urgent need to expand education on waste management and recycling, in order to support environmental sustainability.

Overall, this study highlights the importance of strengthening sanitation policies and practices in RA schools to promote a healthy and safe learning environment. Through collaborative efforts to address identified deficiencies, stakeholders can contribute to improving student health and creating a more inclusive educational environment. Future research should explore the long-term impacts of improved sanitation facilities and hygiene education on students' health and academic performance.

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