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Relationship Between Personal Hygiene and the Incidence of Diarrhea on Students 104219 SDN Tanjung Anom

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Article Info

ABSTRACT

Diarrhea is a disease that is often found in developing countries, including Indonesia, and is the main cause of morbidity and mortality in children. One factor that has a big role is personal hygiene behavior. Elementary school age children are a group that is very vulnerable to diarrheal infections. This study aims to identify the relationship between personal hygiene habits and the incidence of diarrhea in students at SDN 104219 Tanjung Anom. This research uses a quantitative descriptive approach to analyze the relationship between personal hygiene and the incidence of diarrhea in students at SDN 104219 Tanjung Anom. The population in this study consisted of 40 students in grades V and VI who were selected using the purposive sampling method to take the pretest and posttest as a measurement tool. The results of this research can be seen from the increase in the average student score from the pretest of 14.825 to 18.35 on the posttest. Apart from that, the correlation test results show a strong and significant relationship between the pretest and posttest results with an r value of 0.706 and p = 0.000. So it can be said that there is a relationship between personal hygiene and the incidence of diarrhea.

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INTRODUCTION

Diarrhea is one of the diseases that is often found in developing countries, including Indonesia, and is the main cause of morbidity and mortality in children. The World Health Organization (WHO) estimates that diarrhea accounts for a significant mortality rate in children under the age of five each year. This condition not only has an impact on individual health, but also provides a great social and economic burden for the community. Diarrheal diseases can cause acute dehydration, malnutrition, and even death if not treated quickly and appropriately (Hutasoit 2020).

The main causes of diarrhea are complex, involving a variety of environmental, behavioral, and sanitary factors. One of the factors that has a big role is personal hygiene behavior. The habit of washing hands with soap before eating and after using the toilet, maintaining nail hygiene, and eating hygienic food are important preventive measures to avoid infection with pathogens that cause diarrhea. However, the low awareness and understanding of the public, especially children, about the importance of personal hygiene is often the main cause of the high prevalence of diarrhea in Indonesia (Ruminem et al. 2024).

Primary school-age children are a group that is very susceptible to diarrheal infections. At this age, children tend to lack understanding of the importance of personal hygiene and are often exposed to less hygienic environments, both at home and at school. In addition, limited access to adequate sanitation facilities in the school environment often exacerbates the situation. Schools, as places where children spend most of their time, have a strategic role in increasing students' awareness and understanding of the

importance of clean and healthy living behaviors (Anggraini, Anggraeni, and Rosaline 2022).

SDN 104219 Tanjung Anom, located in Deli Serdang Regency, North Sumatra, is one of the elementary schools that faces challenges in overcoming hygiene and student health problems. Based on the initial data obtained, there are a number of cases of diarrhea in students at this school which are suspected to be related to poor personal hygiene habits. This shows the need for special attention to students' clean living habits as one of the efforts to prevent continuous diarrhea.

Through health counseling conducted at SDN 104219 Tanjung Anom, an overview of the level of students' knowledge about personal hygiene before and after educational interventions was obtained. The results of the pretest and posttest showed an increase in students' understanding of the importance of maintaining personal hygiene, but a more in-depth analysis is needed to find out the impact on the reduction of diarrhea cases in the school.

This study aims to identify the relationship between personal hygiene habits and the incidence of diarrhea in students of SDN 104219 Tanjung Anom. This study not only seeks to provide scientific data on the relationship, but also serves as a foundation for designing more effective health intervention programs in the future. By involving all stakeholders, including teachers, parents, and students themselves, it is hoped that a school environment that supports clean and healthy living behaviors can be created.

In addition, the results of this study are expected to contribute to the development of health education programs in other elementary schools, especially in areas with a high incidence of diarrhea. Thus, efforts to prevent and control diarrhea through a health education approach can be implemented more widely and sustainably.

RESEARCH METHODS

This study uses a quantitative descriptive approach to analyze the relationship between personal hygiene and the incidence of diarrhea in students of SDN 104219 Tanjung Anom. The research subjects consisted of 40 students who were selected using the purposive sampling method, namely students in grades V and VI. Data was collected through pre-test and post-test which measured the level of students' knowledge about personal hygiene before and after counseling. Counseling was provided using PowerPoint media, focusing on the importance of maintaining personal hygiene to prevent diarrhea. In addition, this study also records logistics expenses, such as the purchase of gifts, consumption, and counseling tools to support the implementation of activities. Data analysis was carried out with the Pearson correlation test to assess the relationship between pre-test and post-test scores, where the results showed a significant positive correlation at a confidence level of 0.01. The results of this study are expected to contribute to increasing awareness of the importance of personal hygiene in preventing diarrheal diseases in elementary school children.

RESULTS

Table 1. Respondent characteristics

Category	N	%
Gender		
Man	16	40
Woman	24	60
Total	**40**	**100**
Class		
V	20	50
VI	20	50
Total	**40**	**100**

Based on table 1, out of a total of 40 respondents consisting of students in grades V and VI, the majority of respondents were women as many as 24 people (60%), while men amounted to 16 people (40%). The distribution of respondents by class was evenly distributed, with each class represented by 20 students (50%). This data shows the balance of the proportion of respondents based on class, but there is a dominance of female participation compared to men. This difference in the proportion of sex has the potential to influence the results of the study, especially if there are differences in characteristics or behavior patterns between the two gender groups.

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Table 2. Pretest and Posttest Results

Average Total		Research Results
Pretest	593	14,825
Posttest	734	18,35

In Table 2, the results of the pretest and posttest show an increase in the average score. The average pretest score was 14.825 with a total score of 593, while the average posttest score increased to 18.35 with a total score of 734.

Table 3. Correlation Test Results (SPSS)

Correlations

		Pretest	Posttest
Pretest	Pearson Correlation	1	.706**
	Sig. (2-tailed)		.000
	N	40	40
Posttest	Pearson Correlation	.706**	1
	Sig. (2-tailed)	.000	
	N	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows the results of the Pearson correlation test between pretest and posttest scores with a correlation value of 0.706 which is significant at the level of 0.01 (Sig. 0.000). This shows that there is a strong positive relationship between pretest and posttest scores.

DISCUSSION

The results from Table 2 show a significant increase in the average pretest and posttest scores, from 14.825 to 18.35. This increase reflects the effectiveness of educational intervention programs related to personal hygiene provided to students of SDN 104219 Tanjung Anom. This increase in scores also shows that students not only receive information but are also able to understand it and apply it, at least in the context of posttest measurement. The total score that rose from 593 on the pretest to 734 on the posttest indicates that most students have improved in their understanding of the material being taught. This is very important in the context of health, especially in relation to the prevention of diarrhea, considering that personal hygiene is one of the key factors in breaking the chain of transmission of the disease.

The focus on the correlation results shown in Table 3 strengthens the conclusions regarding the effectiveness of the intervention program. A Pearson correlation value of 0.706 indicates a strong relationship between pretest and posttest scores, which means students with a good initial understanding of the pretest tend to show better results on the posttest.

Very high statistical significance (Sig. 0.000) at a confidence level of 99% ($\alpha = 0.01$) suggests that this relationship is not a coincidence, but rather the result of a structured learning process. In other words, the interventions provided not only strengthen the understanding of students who already have basic knowledge, but also help students with lower initial scores to improve their understanding.

From these results, it can be concluded that the educational approach carried out has successfully facilitated students to increase their awareness of the importance of personal hygiene. The increase in the average posttest score indicates effective knowledge transfer, which is the main goal of this educational program. In addition, the strong correlation relationship also reflects that students who are better prepared or have a better level of initial understanding can make the most of the intervention more optimally. Therefore, similar intervention programs may be considered for wider implementation, with adjustments that may be necessary for students with low initial scores, so that they can also achieve the maximum level of understanding.

Furthermore, it is important to consider the influence of other factors such as the method of delivery of the material, the timing of the implementation of the intervention, and the support of the learning environment that may also contribute to the results obtained. Further research can be conducted to evaluate the extent to which this improvement can be maintained in the long term and how it impacts students' real

behavior in maintaining personal hygiene and preventing diarrhea.

CONCLUSION

The personal hygiene education program implemented at SDN 104219 Tanjung Anom has succeeded in increasing students' understanding of the importance of maintaining personal hygiene to prevent diarrheal diseases. This is evident from the increase in the average student score from the pretest by 14.825 to 18.35 in the posttest. In addition, the results of the correlation test showed a strong and significant relationship between the pretest and posttest results with an r-value of 0.706 and p = 0.000. These findings indicate that the educational intervention provided is effective in increasing students' knowledge about personal hygiene.

SUGGESTION

As a follow-up, similar educational programs need to be implemented on an ongoing basis to ensure that students' understanding is maintained and developed. More interactive learning methods, such as simulations or hands-on practice, can be applied to strengthen the effectiveness of the program. In addition, involving parents in this educational program will help create synergy between learning at school and at home. Further research is also suggested to evaluate the long-term impact of these programs on real behavior changes of students. Periodic evaluations are necessary to identify program deficiencies and design better strategies in the future.

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