



CORRELATION HANDWASHING KNOWLEDGE HEAD OF HOUSEHOLD AND DIARRHEA CASES IN SUKABUMI REGENCY

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ABSTRACT

Penyakit diare masih menjadi masalah kesehatan global, terutama di Indonesia. Penelitian ini bertujuan untuk mengetahui hubungan antara pengetahuan cara cuci tangan pakai sabun dengan kejadian diare pada kepala keluarga di Desa Cisarua. Penelitian ini menggunakan metode analitik korelasional dengan pendekatan cross-sectional. Sampel sebanyak 78 responden dipilih menggunakan teknik **accidental sampling** selama periode penelitian dari Mei hingga Agustus 2024. Analisis data dilakukan menggunakan uji **Chi-Square**. Hasil penelitian menunjukkan bahwa responden dengan pengetahuan kepala keluarga kurang tentang cara mencuci tangan memiliki insiden diare yang lebih tinggi ($p < 0.05$). Kesimpulan dari penelitian ini adalah terdapat hubungan yang signifikan antara pengetahuan cara mencuci tangan kepala keluargadengan kejadian diare. Peningkatan edukasi kesehatan mengenai praktik cuci tangan yang baik dapat menurunkan angka kejadian diare

Keywords: Cuci Tangan Pakai Sabun; Diare; Pengetahuan

ABSTRAK

Diarrheal diseases remain a global health concern, particularly in Indonesia. This study aims to examine the relationship between knowledge of proper handwashing with soap and the incidence of diarrhea among family heads in Cisarua Village. The research employed a correlational analytic method with a cross-sectional approach. A total of 78 respondents were selected using accidental sampling during the research period from May to August 2024. Data analysis was conducted using the Chi-Square test. The results indicated that respondents with lower knowledge of handwashing practices among family heads had a higher incidence of diarrhea ($p < 0.05$). The conclusion of this study is that there is a significant relationship between family heads' knowledge of handwashing practices and diarrhea incidence. Improving health education on proper handwashing practices can reduce the incidence of diarrhea.

Keywords: Diarrhea; Handwashing with Soap; Knowledge

INTRODUCTION (*Times new roman, 12pts, spaces 1.5*)

Diarrhea is one of the major health problems in Indonesia. The incidence and mortality rates due to diarrhea remain high. Diarrhea is a condition where the affected person defecates more frequently than usual (Dewi A Q, et.al, 2021). Diarrhea in children is defined as passing stools more than three times a day, accompanied by changes in stool consistency to a more liquid form, with or without mucus or blood, lasting less than a week (Juffrie and Soenarto, 2012). Diarrhea is an environmentally-based disease that occurs in almost all geographic regions, causing morbidity and mortality in children, particularly among low- and middle-income communities (Troeger, et.al, 2018).

According to the World Health Organization (WHO), diarrhea is defined as the passage of three or more loose or liquid stools per day. Diarrhea is usually a symptom of an infection in the intestinal tract, which can be caused by various bacterial, viral, and parasitic organisms. Infection spreads through contaminated food or drinking water, or from person to person due to poor hygiene (WHO, 2024).

WHO data shows that there are 1.7 billion cases of diarrhea worldwide each year (WHO, 2024). According to Indonesia's Health Profile, diarrhea ranks second among diseases that cause death in children under five, following pneumonia (Ministry of Health, 2023). According to the Ministry of Health in 2017, the number of diarrhea cases reached 7 million, with the highest incidence occurring in West Java Province. The West Java Provincial Health Office reported that the handling of diarrhea cases continues to increase, with 1,297,021 cases recorded.

The high number of diarrhea cases is caused by many factors, including unhealthy environmental conditions and irregular eating habits (Hastuty and Utami, 2019; Rahmaniu et al, 2022). Personal hygiene is also closely related to the occurrence of diarrhea (Nur and Siswani, 2019). One way to maintain personal hygiene is through handwashing with soap under running water (Adha et al, 2021). According to WHO, interventions to prevent diarrhea, such as ensuring safe drinking water, improved sanitation, and handwashing with soap, can reduce the risk of disease (WHO, 2024). WHO data shows that washing hands with soap can reduce diarrhea cases by 45% (Firdaus, 2017). According to Kusmo (2020), efforts to improve hand hygiene can be enhanced through education, especially for children. Education is a process aimed at improving the community's ability to maintain and improve their health (Luthfi et al, 2021).

A preliminary study at the Limbangan Health Center showed that 5 out of 10 residents in Limbangan had experienced diarrhea due to improper handwashing practices with soap. Based on these reasons, the author is interested in researching the relationship between knowledge of

handwashing with soap and the incidence of diarrhea among heads of households in the working area of the Limbangan Health Center, Sukabumi Regency.

METHODS

The research method used in this study is an *analytical correlational* study with a *Cross-Sectional* approach, aimed at determining the relationship between knowledge of handwashing with soap and diarrhea cases among heads of households in Cisarua Village. This research was conducted in Cisarua Village, in the working area of the Limbangan Health Center, Sukabumi Regency, from May to Agustus 2024. The population in this study consisted of all heads of households in Cisarua Village, totaling 365 individuals. The sample size was 78 respondents, selected using *Accidental Sampling*. The inclusion criteria for this study were heads of households who had experienced diarrhea, while the exclusion criteria were those who were unwilling to participate as respondents.

Data collection was carried out through the distribution of questionnaires to the respondents, measuring their knowledge about handwashing with soap and the occurrence of diarrhea they experienced. Primary data was obtained directly from respondents through the questionnaires, while secondary data was sourced from libraries and records from the Limbangan Health Center. The research instrument was a questionnaire that measured the two main variables: knowledge of handwashing with soap and the diarrhea cases.

The sample size was determined using the *Slovin* formula with a 10% margin of error, resulting in a sample size of 78 respondents. Data analysis was conducted using the *Chi-Square* statistical test to examine the relationship between handwashing knowledge and the incidence of diarrhea, with a 95% confidence level ($p < 0.05$), thus results were considered significant if they met this criterion.

RESULTS

This research was conducted on 78 respondents in Cisarua Village, within the working area of the Limbangan Health Center, Sukabumi Regency. Data were collected through questionnaires regarding knowledge of handwashing with soap and the diarrhea cases. The results are presented in tables and narrative form as follows.

1. Distribution of Respondents' Knowledge

The table below presents the frequency distribution of respondents' knowledge about handwashing with soap.

Table 1. Frequency Distribution of Knowledge About Handwashing with Soap

Knowledge	Frequency	Percentage (%)
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Good	11	14.1
Fair	37	47.4
Poor	30	38.5
Total	78	100%

(Source: questionnaire results in Cisarua Village, May 16-18, 2024)

From Table 1, it is evident that the majority of respondents (47.4%) had fair knowledge, followed by 38.5% with poor knowledge, and only 14.1% with good knowledge.

2. Distribution of Diarrhea Cases

The table below shows the frequency distribution of diarrhea cases among respondents.

Table 2. Frequency Distribution of Diarrhea Cases

Diarrhea	Frequency	Percentage (%)
No	55	70.5
Yes	23	29.5
Total	78	100%

(Source: questionnaire results in RW 04, Cisarua Village, May 16-18, 2019)

According to Table 2, 55 respondents (70.5%) did not experience diarrhea, while 23 respondents (29.5%) reported experiencing diarrhea.

3. Relationship Between Knowledge of Handwashing and Diarrhea Cases

A bivariate analysis was conducted to determine the relationship between knowledge of handwashing with soap and the incidence of diarrhea. The results are shown in the table below.

Table 3. Relationship Between Handwashing Knowledge and Diarrhea Cases

Knowledge	Diarrhea			P-Value
	Yes	No	Total	
Good	0	11	11	0.001
Fair	7	30	37	
Poor	16	14	30	
Total	23	55	78	

(Source: questionnaire results in RW 04, Cisarua Village, May 16-18, 2019)

From Table 3, the P-value = 0.001 (< 0.05), indicating a significant relationship between knowledge of handwashing with soap and the diarrhea cases. Respondents with poor knowledge were more likely to experience diarrhea compared to those with fair or good knowledge

DISCUSSION

The research results indicated a significant relationship between the knowledge of handwashing with soap and the diarrhea cases among the heads of households in Cisarua Village, working area of the Limbangan Health Center, Sukabumi Regency. From the data obtained, it was observed that respondents with poor knowledge of proper handwashing practices were more likely to experience diarrhea compared to those with better knowledge.

This correlation was statistically confirmed with a **P-value of 0.001**, indicating a strong significance in the relationship.

The majority of respondents had "fair" or "poor" knowledge of handwashing practices, which could be attributed to low levels of education and limited access to accurate information regarding the importance of hand hygiene. Knowledge of handwashing, as described by Notoatmodjo (2011), is largely shaped by sensory perception, primarily through the eyes and ears. Many respondents in this study were found to be older, which may have contributed to cognitive decline, affecting their ability to receive and process information about proper hand hygiene.

The findings of this study are consistent with the research by Prasetyoningsih (2015), which also found a significant relationship between knowledge of proper handwashing and the incidence of diarrhea in the elderly. The study suggested that the better the knowledge about handwashing, the lower the incidence of diarrhea. This emphasizes the need for targeted educational interventions by healthcare professionals, particularly aimed at improving handwashing practices among heads of households.

In addition, another supporting study by Wahyu Dekawati (2014) showed a similar pattern where poor handwashing habits were linked to higher rates of diarrhea. The study further highlighted the fecal-oral transmission of diarrheal pathogens, which commonly occurs through contaminated hands, food, and water.

It is crucial that healthcare providers focus on increasing awareness and knowledge of proper handwashing techniques. Educational campaigns and consistent health promotion activities, particularly in rural areas, could significantly reduce the incidence of diarrhea. This intervention is not only cost-effective but also crucial in preventing the spread of infections in communities.

By improving the dissemination of information about the benefits of handwashing with soap and promoting behavior change through educational efforts, the community's health outcomes can be greatly improved, particularly in reducing preventable diseases like diarrhea.

CONCLUSION

The findings of this study demonstrate a significant relationship between the knowledge of proper handwashing practices and the diarrhea cases among the heads of households in Cisarua Village. A majority of respondents exhibited low to moderate knowledge regarding handwashing, which was directly associated with a higher diarrhea cases. Respondents with better knowledge of handwashing practices were less likely to experience diarrhea. These

results underline the crucial role that hygiene education plays in preventing diarrhea, especially in areas with lower levels of health awareness.

This study supports previous findings, emphasizing that improved handwashing practices can reduce the spread of diarrheal diseases. Enhancing public health initiatives to educate communities about proper hygiene techniques could significantly reduce preventable diseases like diarrhea. Therefore, targeted interventions are essential to ensure that residents in rural areas adopt these health practices.

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