THE RELATIONSHIP BETWEEN KNOWLEDGE LEVEL, ATTITUDE AND BEHAVIOR OF HANDWASHING WITH SOAP (CTPS) WITH DIARRHEA INCIDENCE AT PUBLIC HEALTH CENTER X PURWAKARTA

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Abstract

Diarrhea is a disease that is often found in health facilities. Diarrhea is one of the transmitting diseases with a relatively high morbidity and mortality rate. Diarrhea is a disease that is influenced by several factors, one of them is public behavior. One example of common public behavior is the lack of public enthusiasm to wash their hands with soap before eating. This is an analytic observational study with a cross sectional research design. The data is conducted from the patients of Public Health Center X on July 2021 by using educational questionnaires, attitude, and the relations of hand washing with soap behavior with the occurrence of diarrhea. The research data is displayed in tabular form and analyzed with a chi-square statistical test. In this research, obtained from 80 subjects, with 45% research subjects did experience diarrhea within the last 3 months, whereas the rest did not experience diarrhea. In this research as well obtained a very significant relationship between knowledge, attitude, and hand washing with soap behavior with the occurrence of diarrhea.

Keywords *: knowledge, attitude and behavior of washing hands with soap (CTPS), diarrhea.*

Abstract

Diare merupakan penyakit yang sering dijumpai di fasilitas kesehatan. Diare merupakan salah satu penyakit menular dengan angka kesakitan dan kematian yang relatif tinggi. Diare merupakan penyakit yang dipengaruhi oleh beberapa faktor, salah satunya faktor perilaku masyarakat. Faktor perilaku contohnya seperti kurangnya antusias masyarakat untuk mencuci tangan dengan sabun sebelum makan. Penelitian ini merupakan penelitian observasional analitik dengan desain penelitian *cross sectional.* Data diambil dari pasien Puskesmas X pada bulan Juli 2021 dengan menggunakan kuesioner pengetahuan, sikap dan perilaku cuci tangan pakai sabun (CTPS) dengan kejadian diare. Data hasil penelitian dipaparkan dalam bentuk tabel dan dianalisis dengan uji statistik *Chi-square*. Pada penelitian ini didapatkan, dari 80 subjek, dengan 45,0% subjek penelitian tidak mengalami diare dalam kurun waktu 3 bulan terakhir, sedangkan sisanya yang tidak mengalami diare. Pada penelitian ini juga didapatkan pengaruh yang sangat signifikan antara pengetahuan (p=0,002), sikap (p=0,017), dan perilaku cuci tangan pakai sabun (CTPS) (p=0,003) dengan kejadian diare.

Kata Kunci : pengetahuan, sikap dan perilaku cuci tangan pakai sabun (CTPS), diare.

Introduction

Diarrhea is a disease that is often found in health facilities. Diarrhea is one of the infectious diseases with a relatively high mortality and mortality rate. Diarrhea is defecation with a soft to liquid consistency, it can even be in the form of liquid only, with a frequency that is more frequent than usual, ie more than or equal to 3 times a day. Diarrhea is also characterized by symptoms of fever, dehydration, sunken eyes, nausea and vomiting, weakness, paleness, loss of appetite, dry mucous membranes, and decreased urine production.[1]

Diarrhea is a disease that is influenced by several factors, namely; environmental factors, community behavior actors and also the lack of public knowledge about diarrhea [2, 3]. One of the descriptions of unfavorable environmental factors such as inadequate sanitation conditions or inadequate clean water infrastructure. Community

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behavior factors such as the lack of community enthusiasm to wash hands with soap before eating and after using the toilet.

Although there have been improvements in health and socioeconomic conditions in developed countries, the incidence of diarrheal disease is still high and is still an important health problem [4]. The incidence of diarrhea is 0.5-2/episode/person/year in developed countries with developing countries have higher rates.[4] 200 million people in the USA currently have 99 million people with diarrhea each year, and that number could be higher and could increase every year.

One of the risk factors for diarrhea is the lack of people's behavior to wash their hands with soap.[5] Hand washing with soap is one of the sanitation efforts by cleaning hands and fingers using water and soap by humans to keep them clean and break the chain of germs.[5] Hand washing with soap (CTPS) is one of the efforts that can be used as disease prevention. This is done because hands are often germ-carrying agents that can spread pathogens either through direct or indirect contact (using other surfaces such as doorknobs, keys, money, etc.).

Methods

This study used analytical observational research methods, with a research design in the form of *Chi Square* to look at the relationship between knowledge, attitudes and behavior of Handwashing Using Soap (CTPS). with the occurrence of diarrhea at the Public Health Center X. This research sample was taken by calculating the sample size formula for the Chi Square test or The Difference of Proportion Test and obtained a sample of at least 80 study subjects and obtained 82 samples that meet the sample criteria [6]. Research materials in the form of data obtained from questionnaires of knowledge, attitudes, and behavior of handwashing using soap (CTPS) and diarrhea questionnaires that have been validated with the methods used in this validity test is to use the calculation of *product moment* correlation. Data can be said to be valid or valid if the correlation of items with positive factors and r calculates positive and r calculates > r table. If it does not meet these two things , the item is aborted. The value r of the table is calculated as follows, for df = n – 2 with n is the number of respondents or in this study df = 80 – 2 = 78. The significance level of 5% can be the number 0.2199. The results of the questionnaire validity test knowledge, attitude and behavior of handwashing using soap (CTPS) with the results of the questionnaire validity test are 8 items of questions for questionnaires knowledge, 7 question items for attitude questionnaires and 10 question items for handwashing behavior questionnaires using soap (CTPS) distributed to 82 respondents targeted research it was found that the questionnaire questions all had a value of r *pearson product* moments above r table, in other words all items of questionnaire questions were valid.

The study subject was a patient of the Public Health Center X who was willing to fill out the questionnaire and complete the complete questionnaire filling. The privacy of participants in this study is strictly protected in accordance with ethics. The process of retrieving this research data began on July 29 , 202. The research results are presented in the form of tables and analyzed with *the Chi-square* statistical test.

Results

Data collection in this study was carried out by collecting questionnaire data from patients of Public Health Center X. There were 82 respondents who had met the inclusion criteria and did not meet the exclusion criteria [7].

The results of research on the influence of knowledge levels on handwashing with soap on the incidence of diarrhea in patients at the Public Health Center X can be seen in table 1:

Table 1. The Effect of Knowledge Level of Handwashing with Soap on the Incidence of Diarrhea in Patients at the Public Health Center X

Konwledge level	Diarrhea incidence				Total		*p values*	*OR*	*95% CI*
	Yes		No						
	n	%	N	%	N	%			
Low	17	73,9	6	26,1	23	100,0	0,002	5,128	(1,754-14,925)
Hight	21	35,6	38	64,4	59	100,0			
Total	38	46,3	44	53,7	82	100,0			

obtained from a total of 23 research subjects (100%) who have a low level of knowledge, as many as 73.9% experienced diarrhea in the last 3 months and as many as 26.1% did not experience diarrhea in the last 3 months. For the total research subjects who had a high level of knowledge, namely 58 research subjects (100%) it was found that 35.6% had diarrhea in the last 3 months and 64.4% did not experience diarrhea in the last 3 months.

Chi-square statistical results show the value of p = 0.002 (p <0.05), then H0 is rejected; It can be concluded that there is a significant effect between knowledge of washing hands with soap

and the incidence of diarrhea. In addition, the Odd ratio value was 5.128, which means that research subjects who have a low level of knowledge are 5.128 times more likely to have diarrhea than research subjects who have a high level of knowledge.

The results of the study on the effect of hand washing with soap on the incidence of diarrhea in patients at the Public Health Center X can be seen in table 2

Table 2. The Effect of Handwashing with Soap on the Incidence of Diarrhea in Patients at the Public Health Center X

Attitude	Diarrhea Incidence				Total		*p values*	*OR*	*95% CI*
	Yes		No						
	n	%	n	%	N	%			
Negative	23	62,2	14	37,8	37	100,0	0,009	3,289	(1,325-8,130)
Positive	15	33,3	30	66,7	45	100,0			
Total	38	46,3	44	53,7	82	100,0			

Based on table 2, it was found that from a total of 37 research subjects (100%) who had a negative attitude towards hand washing with soap (CTPS), it was found that 62.2% had diarrhea in the last 3 months and 37.8% did not experience diarrhea in the last 3 months.

For the total research subjects who had a positive attitude towards hand washing with soap, 45 research subjects (100%) found 33.3% had diarrhea in the last 3 months and 66.7% did not experience diarrhea in the last 3 months. Chi-square statistical results show the value of p = 0.009 (p <0.05), then H0 is rejected; It can be concluded that there is a significant effect between the attitude of washing hands with soap and the incidence of diarrhea. In addition, the Odd ratio value was 3.289, which means that research subjects who have a negative attitude towards hand washing with soap (CTPS) are 3.289 times more likely to get diarrhea than research subjects who have a positive attitude.

The results of the study on the effect of hand washing with soap on the incidence of diarrhea in patients at the Public Health Center X can be seen in table 4.2.3:

33.3% experienced diarrhea in the last 3 months and 66.7% did not experience diarrhea in the last 3 months.

Chi-square statistical results show the value of p = 0.009 (p <0.05), then H0 is rejected; It can be concluded that there is a significant effect between the attitude of washing hands with soap and the incidence of diarrhea. In addition, the Odd ratio value was 3.289, which means that research subjects who have a negative attitude towards hand washing with soap (CTPS) are 3.289 times more likely to get diarrhea than research subjects who have a positive attitude.

The results of the study on the effect of hand washing with soap on the incidence of diarrhea in patients at the Public Health Center X can be seen in table 4.2.3:

Table 3. The Effect of Handwashing with Soap on the Incidence of Diarrhea in Patients at the Public Health Center X

Behavior	Diarrhea Incidence				Total		*p values*	*OR*	*95% CI*
	Yes		No						
	n	%	n	%	N	%			
Passive	28	62,2	17	37,8	45	100,0	0,001	4,444	(1,733-11,364)
Active	10	27,0	27	73,0	37	100,0			
Total	38	46,3	44	53,7	82	100,0			

Based on table 3. obtained from a total of 45 research subjects (100%) who have passive behavior towards hand washing with soap (CTPS), it was found that 62.2% experienced diarrhea in the last 3 months and 37.8% did not experience diarrhea. in the last 3 months. For the total research subjects who have active behavior towards hand washing with soap (CTPS), there are 37 research subjects (100%) and 27.0% have experienced diarrhea for the last 3 months and 73.0% have not experienced diarrhea for 3 months. final.

Chi-square statistical results show the value of p = 0.001 (p <0.05), then H0 is rejected; it can be concluded that there is a significant influence between the behavior of washing hands with soap (CTPS) with the incidence of diarrhea. In addition, the Odd ratio value of 4.444 means that research subjects who have passive behavior towards washing hands with soap (CTPS) are 4.444 times more likely to get diarrhea than research subjects who have active behavior.

Discussion

In this study, there were 82 subjects, 38 research subjects experienced diarrhea during the last 3 months, and 44 research subjects did not experience diarrhea for the last 3 months. Where from the results of the study as many as 23 research subjects from a total of 80 samples had a low level of knowledge and found more research subjects who had low knowledge who had a history of diarrhea for the last 3 months than research subjects who had high knowledge. This result is in accordance with previous research conducted by [8] with the results of this study it is known that low knowledge of hand washing with soap can increase the incidence of diarrhea.

It was also found that a total of 37 research subjects from a total of 80 samples had a negative attitude towards hand washing with soap, and it was concluded that the research subjects who had a negative attitude had more of a history of diarrhea during the last 3 months than those who had a positive attitude. This result is in accordance with previous research conducted by [9]with the results of this study it is known that a negative attitude towards washing hands with soap can increase the incidence of diarrhea.

In addition, for the behavior of washing hands with soap, 45 research subjects from a total of 80 samples had passive behavior towards washing hands with soap, and it was obtained from the results of this study that research subjects who had passive behavior towards washing hands with soap experienced diarrhea for the last 3 months. more than research subjects who have active behavior. This result is in accordance with previous research conducted by Tampara et al., with the results of this study it is known that passive hand washing with soap can increase the incidence of diarrhea.15

Conclusion

From the results of this study it can be concluded that:

1. In this study, 38 research subjects experienced diarrhea during the last 3 months, while the rest did not.
2. The level of knowledge of hand washing with soap is related to the incidence of diarrhea in the community.
3. The attitude of the community towards washing hands with soap is related to the incidence of diarrhea in the community.
4. Community behavior towards washing hands with soap is related to the incidence of diarrhea in the community.

References

1. Tornheim JA, Manya AS, Oyando N, et al. The epidemiology of hospitalization with diarrhea in rural Kenya: the utility of existing health facility data in developing countries. International Journal of Infectious Diseases. 2010;14(6):e499-e505. https://doi.org/10.1016/j.ijid.2009.07.021.
2. Mølbak K, Jensen H, Ingholt L, et al. Risk factors for diarrheal disease incidence in early childhood: a community cohort study from Guinea-Bissau. American Journal of Epidemiology. 1997;146(3):273-82. https://doi.org/10.1093/oxfordjournals.aje.a009263.
3. Bustreo F, Harding A, Axelsson H. Can developing countries achieve adequate improvements in child health outcomes without engaging the private sector? Bulletin of the world health organization. 2003;81:886-95.
4. Adams NL, Rose TC, Hawker J, et al. Relationship between socioeconomic status and gastrointestinal infections in developed countries: A systematic review and meta-analysis. PLoS One. 2018;13(1):e0191633. https://doi.org/10.1371/journal.pone.0191633.
5. Susanti E. Risk factors for diarrhea cases in communities living along Deli River, North Sumatera. Journal of Epidemiology and Public Health. 2018;4(01):47-54. https://doi.org/10.26911/jepublichealth.2019.04.01.06.
6. Fisher MJ, Marshall AP, Mitchell M. Testing differences in proportions. Australian Critical Care. 2011;24(2):133-8. https://doi.org/10.1016/j.aucc.2011.01.005.
7. Bowling A. Mode of questionnaire administration can have serious effects on data quality. Journal of public health. 2005;27(3):281-91. https://doi.org/10.1093/pubmed/fdi031.
8. Rabbi SE, Dey NC. Exploring the gap between hand washing knowledge and practices in Bangladesh: a cross-sectional comparative study. BMC public health. 2013;13(1):1-7. https://doi.org/10.1186/1471-2458-13-89.
9. Luby SP, Agboatwalla M, Feikin DR, et al. Effect of handwashing on child health: a randomised controlled trial. The Lancet. 2005;366(9481):225-33. https://doi.org/10.1016/S0140-6736(05)66912-7.