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## Self-Efficacy Correlated with Diarrhea Prevention Behaviors



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### Abstract

Diarrhea is a gastrointestinal disease with extraordinary events (KLB) that requires special attention because the high morbidity and death rates are still a health problem for people worldwide, especially in developing countries like Indonesia. It happens because of the low correlation of self-efficacy in implementing diarrhea prevention behaviors. This research aimed to determine the correlation between self-efficacy and diarrhea prevention behavior in the work area of Kalianget Health Center. The type of the research was quantitative with an analytical observational design with a cross-sectional approach. The population was 217 respondents suffering from Diarrhea and the sample was 67 respondents taken by simple random sampling. The data collection used questionnaires. Test analysis using Spearman rank test. This research showed that as many as 47 respondents (70.1%) had a moderate level of Self-efficacy, while most respondents had behavior Diarrhea prevention in the sufficient category 48 respondents (71.6%). Analysis of the data obtained there was a correlation between self-efficacy and preventive behavior Diarrhea in the working area of Kalianget Health Center. Prevention of Diarrhea in people with Diarrhea can be done by increasing self-efficacy so that diarrhea prevention behavior can be carried out properly and correctly to reduce the incidence of Diarrhea in the community.

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## INTRODUCTION

According to WHO (2019), Diarrhea is a disorder of defecation with a liquid consistency (loose stools) more than three times a day or 24 hours accompanied by blood and mucus with a frequency of more often than usual. Based on the type, Diarrhea consists of acute Diarrhea and persistent or chronic Diarrhea. Acute Diarrhea occurs for less than 14 days, while chronic Diarrhea occurs for more than 14 days (Susanti, Manulu, & Munandar, 2022). Diarrhea is a gastrointestinal disease with extraordinary events (KLB) that requires special attention because high morbidity and mortality rates are still a public health problem throughout the world, especially in developing countries such as Indonesia (Ministry of Health, 2020). Diarrhea affects all age groups, including infants, children, adolescents, adults, and the elderly. However, this disease often occurs in children because of their imperfect body immunity. According to data by WHO (2019), Diarrhea occurs in all geographical areas, so it is called an environment-based disease. Per year, there are about 1.7 billion cases of Diarrhea, with a death rate reaching 760,000 children under the age of five years. According to the Indonesian Ministry of Health (2020), the number of recapitulations of extraordinary events (KLB) of toddler diarrhea in Indonesia was in 2018 with a percentage (1.14%), 2019 with a percentage (2.47%) and 2020 with a percentage (4.00%). The discovery of cases of toddler diarrhea in Indonesia found the lowest data in 2018 while the highest data in 2020 (Apriani & Sastra, 2022). The number of diarrhea cases in toddlers in East Java predominantly increased from 6.6% in 2013 to 10.7% in 2018, occupying the second position after West Java. East Java has the second-highest number of diarrhea cases, more than 151,878, with an average of 7.6%. At the same time, Surabaya serves 78,463 cases, almost half of all cases in East Java (Ministry of Health RI, 2019).

The discovery of diarrhea cases in the Sumenep district in the last three years tends to decrease from 2610 cases of toddler diarrhea in 2018, with a percentage (22%), then 1844 cases of toddler diarrhea in 2019, with a percentage (5.97%) and as many as 1318 toddler diarrhea in 2020 with a percentage (1.41%) The decrease in diarrhea cases can be caused by several factors including the level of public understanding on the prevention of Diarrhea is getting better. There is also a tendency for some people to seek self-treatment when families

suffer from mild Diarrhea (not brought to health services). So the number of diarrhea sufferers handled by health services is not much because many people with mild Diarrhea seek their own treatment (Dinkes Sumenep, 2020). Data obtained at the Kalianget Health Center with diarrhea cases in Kalianget District, in 2019, there were 123 diarrhea sufferers. In 2020, there was an increase of 296 diarrhea sufferers, while in 2021, diarrhea cases at the Kalianget Health Center decreased to 196 cases of diarrhea sufferers. In 2022, diarrhea cases in Kalianget District increased by 217 diarrhea sufferers. The increasing incidence of Diarrhea in the work area of Kalianget Health Center is due to low public awareness about the importance of implementing diarrhea prevention behaviors related to *self-efficacy*.

The results of previous research by Intan (2022) obtained respondents who had sufficient knowledge as many as 15 respondents with a percentage (42.9%), most respondents had high self-efficacy as many as 20 respondents with a percentage (57.1%). The results of the Spearman Rank statistical test obtained sig values.  $0.015 < 0.05$  shows a correlation between maternal knowledge and self-efficacy in handling Diarrhea in toddlers at the Garum Blitar Health Center. In line with Ragil's research (2013), the results of the study found that the level of self-efficacy was divided into three levels, namely the level of *low self-efficacy* with a percentage (63.6%), the level of moderate self-efficacy with a percentage (12.3%), and the level of *high self-efficacy* with a percentage (24.1%). The low level of *self-efficacy* is due to most respondents having secondary education with a presentation (66%) with unemployed status (77.8%) also, Family income per month is below the UMR in the Kebumen area with a percentage (75.9%) with the number of family occupancy between one and four people (74.7%). The conclusion obtained from these results is that *self-efficacy* needs to be increased by health workers at the community level, especially in the Rowokele area, Kebumen.

The key to reducing the morbidity and mortality rate of Diarrhea is to carry out diarrhea prevention behaviors. Prevention of Diarrhea and other interventions to reduce morbidity and mortality rates due to Diarrhea will be effective if adjusted to the level of *self-efficacy* in the prevention of Diarrhea. According to Astuti & Syahreni, 2013 *Self-Efficacy* is a person's belief that they can change and regulate certain behaviors by achieving expected goals.

*Self-efficacy* is a person's background to perform an action or control certain conditions. For someone with high *self-efficacy*, the results arising from healthy behavior and their motivation will also be increased to take action. The higher the level of *self-efficacy* in diarrhea prevention, the greater the diarrhea prevention behavior carried out (Joventino, et al., 2012). Knowledge and factors that shape behavior, especially self-efficacy in the management of Diarrhea, need to be explored more deeply related to counseling programs and health services provided. So, the existence of diarrhea prevention behavior can be implemented to improve his health further. The role of the community and health services is very influential in implementing diarrhea prevention behavior to pay more attention to health and hygiene, for example, teaching in maintaining environmental cleanliness such as disposing of garbage in its place, applying 3M, defecating and urinating in clean and

healthy bathrooms.

Because of the high cases or incidence of Diarrhea that tend to increase, especially in Sumenep Regency, precisely in Kalianget District, it makes an interest for researchers to conduct research on the correlation of *self-efficacy* with diarrhea prevention behavior, especially in the Kalianget Health Center Work Area.

## METHODS

The research method was quantitative with an analytical observational design with a *cross-sectional* approach. The population was 217 respondents with Diarrhea and a sample of 67 respondents in the Kalianget Health Center, with a *simple random sampling* technique. The data collection used questionnaires. The analysis test used the *Spearman rank* test  $P < 0.05$ .

## RESULTS

### A. General Data

1. The characteristics of respondents are based on age in the Kalianget Health Center.

Table 5.1 characteristics of respondents by age

No	Age	(f)	(%)
1	15-35 Years	39	58.2
2	36-56 Years	27	40.3
3	> 57 Years Old	1	1.5
Total		67	100.0

Table 5 showed that most respondents aged 15 – 35 years, as many as 39 respondents (58.2%).

2. Characteristics of respondents based on gender in the Kalianget Health Center.

Table 5.2 Characteristics of respondents by sex

No	Gender	(f)	(%)
1	Man	18	26.9
2	Woman	49	73.1
Total		67	100.0

Table 5.2 showed that most of the respondents were female, as many as 49 respondents (73.1%).

3. The characteristics of respondents are based on the level of education in the Kalianget Health Center.

Table 5.3 Characteristics of respondents by education level

No	Education	(f)	(%)
1	Uneducated	2	3.0
2	Elementary School	5	7.5
3	Junior High School	13	19.4
4	Senior High School	35	52.2
5	University	12	17.9
Total		67	100.0

Table 5.3 shows that the education level of respondents is mostly Senior High School, which is 35 respondents

(52.2%).

4. The characteristics of respondents are based on occupation in the Kalianget Health Center.

Table 5.4 Characteristics of respondents by occupation

No	Occupation	(f)	(%)
1	Unemployed	33	49.3
2	Self-employed	28	41.8
3	Civil servants	4	6.0
4	Others	2	3.0
5	Total	67	100.0

Table 5.4 shows that almost half of respondents are unemployed, as many as 33 respondents (49.3).

## B. Specific Data

1. Characteristics Based on *Self-Efficacy*

Table 5.5 Frequency Distribution of Respondents Based on *Self-efficacy* Level

<i>Self Efficacy</i>		(f)	(%)
1	High	17	25.4
2	Medium	47	70.1
3	Low	3	4.5
	Total	67	100.0

Table 5.5 shows that most respondents have a medium *level of Self-Efficacy*, which is 47 respondents (70.1%).

2. TB Disease Transmission Prevention Behavior

Table 5.6 Distribution of respondents' frequency based on the level of diarrhea prevention behavior

Diarrhea Prevention Behavior		(f)	(%)
1	Good	16	23.9
2	Sufficient	48	71.6
3	Less	3	4.5
	Total	67	100.0

Table 5.6 shows that most respondents in diarrhea prevention behavior carried out by respondents are in the sufficient category, as many as 48 respondents (71.6%).

3. Cross-tabulation about the correlation between *self-efficacy* and diarrhea prevention behavior in the Kalianget Health Center.

Table 5.7 Cross-tabulation of *Self-Efficacy* with Diarrhea Prevention Behavior

<i>Self Efficacy</i>	Perilaku Pencegahan Diare						Total	
	Baik		Cukup		Kurang			
	N	%	N	%	N	%	N	%
Tinggi	15	88,23	2	11,76	0	0,0	17	100
Sedang	1	2,1	46	97,87	0	0,0	47	100
Rendah	0	0,0	0	0,0	3	100	3	100
Jumlah	16	23,88	48	71,64	3	4,4	67	100

Uji Rank Spearman  $p$  value = 0,000 <  $\alpha$  (0,05)

Table 5.7 showed that the level of *self-efficacy* in the high category was 17 respondents with good diarrhea prevention behavior as many as 15 respondents (88.23%), and diarrhea prevention behavior was sufficient for as many as 2 respondents (11.76%). The level of *self-efficacy* in the moderate category was 47 respondents with good diarrhea prevention behavior, as many as one respondent (2.1%), and sufficient diarrhea prevention behavior as many as 46 respondents (97.87%). In contrast, the level of *self-efficacy* in the low category was 3 respondents with diarrhea prevention behavior less as many as 3 respondents (100%).

The results of cross-tabulation of self-efficacy with diarrhea prevention behavior showed that the higher the level of self-efficacy, the better the diarrhea prevention behavior. The lower the level of *self-efficacy*, the less diarrhea prevention behavior. Based on the *Spearman* correlation test results, the Spearman correlation coefficient value was (0.903), which means that it had a very strong tightness. The significant number or probability value of self-efficacy (0.000) was lower than the significant standard of 0.05 or ( $p < \alpha$ ).  $H_0$  was rejected, and  $H_1$  was accepted, meaning *self-efficacy* was related to diarrhea prevention behavior in the Kalianget Health Center.

## DISCUSSION

### **Self-Efficacy on Diarrhea Prevention Behavior**

The research results on community self-efficacy in the Kalianget Health Center, Kalianget Sub-district, showed that most respondents had a moderate level of self-efficacy. The word self-efficacy was first conveyed by Bandura, one of the main components of his social-cognitive theory. Self-efficacy is a person's belief in successfully performing a behavior (Sabil, 2023). This opinion aligns with research conducted by Intan, 2022 which shows a correlation between maternal knowledge and self-efficacy in handling Diarrhea in toddlers (Fazrin & Sholafiyah, 2022). This research was conducted at the Blitar Health Center on November 27, 2022. Therefore, good respondents' knowledge must be followed by a high level of self-efficacy as well so as to be able to handle Diarrhea or prevent Diarrhea properly. This opinion is also in line with research conducted by Ragil, 2013 which shows a correlation between maternal self-efficacy and efforts to prevent Diarrhea in children under five years. The results of the same study in Brazil on the correlation between the history of Diarrhea of children and the self-efficacy of diarrhea prevention also stated that there was a significant correlation between the experience of caring for children with Diarrhea and the level of self-efficacy of diarrhea prevention (Astuti & Syahreni, 2013). The study was conducted in six integrated healthcare areas in a sub-district in Kebumen in November 2013. According to (Bandura, 2009), the self-efficacy theory explains that perception determines actions. Then, families with an excellent environment show high self-efficacy in diarrhea prevention. Otherwise, if in a family with an environment with bad conditions, then the level of self-efficacy in diarrhea prevention will also be low.

Health workers need to improve the self-efficacy of respondents and the community. Community-based health services are important in increasing public knowledge so that community self-efficacy in preventing diarrhea increases. It shows that self-efficacy greatly impacts diarrhea-prevention

behavior. Therefore, people need to have a level of self-confidence or self-efficacy in themselves in implementing diarrhea prevention behavior.

### **Diarrhea Prevention Behavior**

The research results on diarrhea prevention behavior in the community, especially in the Kalianget Health Center, showed that most respondents in diarrhea prevention behavior carried out by respondents were at sufficient levels or categories. Diarrhea prevention behavior is an action taken by a person to prevent Diarrhea (Priyanto & Lestari, 2009). Bacteria cause some of the factors that cause Diarrhea through contamination of food and drinks contaminated with feces or direct contact with patients (Nugraheni, 2012). Besides that, the dominant factors in diarrheal disease are hygiene and environmental sanitation. This opinion is in line with research conducted by Yunita, 2021 which states that there is a significant correlation between the level of knowledge and diarrhea prevention behavior, and there is a significant correlation between attitude and the description of diarrhea prevention behavior (Kambu & Azinar, 2021). This research was conducted in the Tlogosari Kulon health center area Semarang on October 14, 2021. So, respondents with a good attitude toward diarrhea prevention behavior are united to reduce the morbidity rate and incidence of Diarrhea. If the attitude of respondents and the public supports the prevention of Diarrhea, the incidence of Diarrhea can be reduced, and vice versa. If the respondents' attitude is not supportive, the incidence of Diarrhea will continue to increase. The study also stated that poor knowledge and poor hand washing can lead to Diarrhea. Prevention applied by the community must be increased to reduce the incidence of Diarrhea. This opinion is also in line with research conducted by Dian, 2019 which states that there is a correlation between good hygiene facilities, good school sanitation, clean canteens, school health units, high student knowledge, positive attitudes, and high school maternal education with the prevention of Diarrhea in elementary school students (Kartika & Murti, 2019). This research was

conducted in Ngawi in October 2019. It shows that diarrhea prevention behavior must be improved, starting in terms of education, knowledge, attitudes, and environmental sanitation of the community in implementing diarrhea prevention because this is very influential on health and morbidity rates and the incidence of Diarrhea.

### **The correlation of self-efficacy with diarrhea prevention behavior**

The results of the research conducted showed that there was a correlation between Self-efficacy and Diarrhea Prevention Behavior in the Kalianget Health Center. According to Albert Bandura, self-efficacy is an individual's subjective consideration of his ability to devise the actions needed to complete the tasks. According to Bandura, several things affect self-efficacy, including gender, age, education level, and experience. Self-efficacy is formed through a learning process that someone at the formal education level can receive. Someone with higher education usually has high self-efficacy because they learn more and receive a lot of information. Low education and health education will affect the receipt of newly known information to respondents, including self-efficacy about Diarrhea. Someone with a higher education will give a more rational response compared to someone who is poorly educated or not educated at all. This opinion aligns with research conducted by Ni Ketut Kimilaningih, 2019, which states a significant correlation exists between self-confidence and diarrhea prevention behavior at the West Denpasar II Health Center (Kimilaningih, 2019). This research was conducted at Puskesmas II West Denpasar, Denpasar City, in 2019. It shows that the higher a person's level of self-efficacy, the higher the diarrhea prevention behavior carried out, and vice versa. The lower the level of self-efficacy possessed, the worse the diarrhea prevention behavior carried out. Self-efficacy in a person is important in applying diarrhea prevention behaviors to reduce the incidence and pain of Diarrhea. Therefore, it is important to increase self-efficacy in a person so that diarrhea prevention behavior can also increase so that it will reduce the number of diarrhea occurrences every year. All communities and health services must participate in this. For example, health services educate the public about how important self-efficacy is in improving diarrhea prevention behavior and provide awareness to the community to always maintain environmental cleanliness that is beneficial for their health.

### **CONCLUSION**

Based on the results and discussion of research on the correlation between *self-efficacy* and diarrhea prevention behavior in the work area of the Kalianget Health Center, it can be concluded that: 1) Diarrhea sufferers in the Kalianget Health Center, Kalianget District, most respondents had a moderate level of *Self-efficacy*, 2) Diarrhea Prevention in Kalianget Health Center, Kalianget District, most respondents in the diarrhea prevention behavior carried out were at the level or category of sufficient., 3) There was a correlation between *Self-efficacy* and diarrhea prevention behavior in the Kalianget Health Center.

### **SUGGESTION**

The results of this study are additional knowledge for the community to increase their *understanding of self-efficacy* in implementing diarrhea prevention behaviors to reduce the incidence of Diarrhea.

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### **CONFLICTS OF INTEREST**

All authors state that there is no conflict of interest in publishing this article.

### **AUTHOR CONTRIBUTION**

All authors contributed in the design of the ideas, analyzing data, preparing manuscripts, and funding.

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