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# The Effect of Counseling on Clean and Healthy Living Behavior (PHBS) on Community Behavior to Prevent Diarrhea

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**Abstract**

Counseling on Clean and Healthy Living Behavior (PHBS) is an activity to convey health messages to the community, groups or individuals in the hope of gaining knowledge about better health, which in the end this knowledge can change the behavior of the community itself. Diarrhea is a disease that occurs due to bad habits of the community, and the most severe risk factor for this disease is death. This study aims to determine the effect of PHBS counseling on changes in people's behavior to prevent diarrhea. This research is a pre-experimental study with one group pretest-posttest design. The pretest is the observation of public health behavior to prevent diarrhea before PHBS counseling, the treatment is in the form of PHBS counseling to the community, while the posttest is the observation of public health behavior to prevent diarrhea after PHBS counseling. Participants as extension subjects came from Waworada, Sie Village, Bima City - Indonesia. The number of participants was 64 people with various characteristics ranging from gender, age, and education. Health behavior was measured using a questionnaire that was conducted to the participants. Each behavioral data was analyzed descriptively and statistically (using paired t-test). The results of the study have shown that the initial observation, before PHBS counseling, most of the people behaved "enough" in preventing diarrheal diseases. After the implementation of PHBS counseling, most of the people behaved "good". That is, descriptively people's behavior changes in preventing diarrheal diseases with PHBS counseling. Statistically, this behavior change was tested and it was found that there was an effect of PHBS counseling on people's behavior to prevent diarrhea ($p$ 0.000 < 0.05). It is hoped that the results of this study can provide empirical evidence, so that the inculcation of health knowledge through counseling can continue to be carried out in a structured manner to the wider community.

**Keywords:** counseling, clean and healthy living behavior, community behavior, diarrheal disease

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## INTRODUCTION

One of the main causes of death is diarrheal disease, and it is found in all parts of the world (Sarker et al., 2019). Around 2.39 billion cases of diarrhea are found every year globally, and in the last seven years it was estimated that 0.53 million children under five died from diarrhea (Fullman et al., 2018; Vos et al., 2016). This figure sets a record for the average death rate for children under the age of five, with a mortality of about nine percent (UNICEF, 2022). Incidence risk (case fatality) and incidence ratio are much lower in developed countries when compared to low to middle income countries (Mashoto et al., 2014). Diarrhea is a disease with the criteria for the frequency of watery bowel movements more than three times per day with a water content of more than 200 grams or 200 ml/24 hours, diarrhea can also be accompanied by blood or mucus (Sari et al., 2017). Diarrhea is included as a food-born disease (Käferstein, 2003). Foodborne disease is a disease caused by consuming contaminated food and drinks (Yeni et al., 2017). Foodborne disease is still a global health problem, especially in developing countries including Indonesia. Based on data

from the Monta Health Center in 2018, the incidence of diarrhea cases was 1.168 cases, spread over 14 villages, one of which was Sie village - Bima City, where diarrhea cases from September to November 2019 were 51 cases.

Many risk factors are suspected of causing diarrheal disease, including poor environmental sanitation, unhygienic water supplies, and poor personal hygiene which can also cause diarrhea (Yasin et al., 2018). Clean and Healthy Living Behavior (PHBS) in the household is an effort to empower household members to know, be willing and able to practice clean and healthy living behaviors, and play an active role in the health movement in the community (Meivi-Sesanelvira et al., 2019). PHBS in the household setting includes delivery assistance by health workers, giving exclusive breastfeeding babies, weighing toddlers regularly, using clean water, washing hands with clean water and soap, using healthy latrines, eradicating mosquito larvae, eating fruits and vegetables every day, exercising. regularly, do not smoke in the house, and dispose of garbage in its place. It is believed that improving the quality of health depends on healthy lifestyle behaviors, healthy lifestyle behaviors can also reduce the risk of major health problems (Matani et al., 2022).

To maintain personal health and also the environment, clean and healthy living behavior is a habit that must be carried out and emphasized to everyone. In Indonesia, the clean and healthy lifestyle development program (PHBS program) has been running for more than 20 years, but its success has not been as expected. It is necessary to handle and oversee the PHBS program that is planned and massive to be implemented in the community (Putri et al., 2019). The latest data from the Directorate of Health Promotion and Community Empowerment, the proportion of households meeting PHBS criteria by province in Indonesia in 2013 is presented in Figure 1.

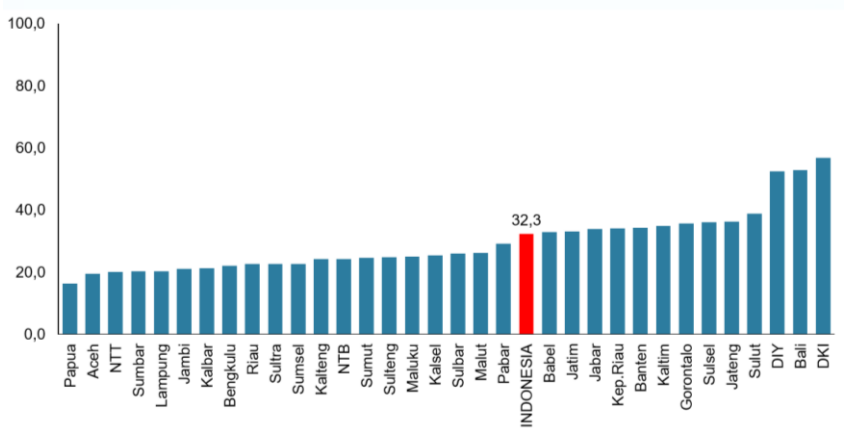


**Figure 1**. Proportion of households meeting PHBS criteria by province in Indonesia

Information from the data in Figure 1 shows that the proportion of households meeting the PHBS criteria in Indonesia is 32.3%, meaning that less than 50% of Indonesians meet the criteria for clean and healthy living behavior. PHBS is basically an effort to transmit experiences about healthy living behavior through individuals, groups or the wider community with communication channels as a medium for sharing information. There is a variety of information that can be shared, such as educational materials to increase knowledge and improve attitudes and behaviors related to a clean and healthy way of life.

Knowledge is an important domain in the formation of one's actions. One of the actions to increase knowledge is counseling. Extension is a psychic learning process that takes place in the active interaction of humans with their environment and produces changes in knowledge, skills and attitudes. Counseling involves social activities, so that health promotion can be formed among the community, knowledge intensity through social activities (e.g. counseling) needs to be done, this was also emphasized in previous studies that

social factors are very important as an instrument for promoting health knowledge in the community (Braveman & Gottlieb, 2014).

Counseling can be done with various methods, including the lecture method, discussion method, demonstration method and a combination of the three methods. One of the health education conducted by health workers is about PHBS to prevent the risk of disease, in the context of this study is diarrhea. The effect of health behavior on healthy living habits can inform stakeholder policy making regarding sustainable health promotion (Bryant, 2002). Specifically, this study aims to determine the effect of counseling on clean and healthy living behavior (PHBS) on people's behavior to prevent diarrheal disease.

## METHOD

This study is a pre-experimental study with a one group pretest-posttest design aimed at assessing the effect of PHBS counseling on changes in people's behavior to prevent diarrhea. The pretest is the observation of public health behavior to prevent diarrhea before PHBS counseling, the treatment is in the form of PHBS counseling to the community, while the posttest is the observation of public health behavior to prevent diarrhea after PHBS counseling.

In this study, participants as extension subjects came from Waworada, Sie Village, Bima City - Indonesia. The number of participants was 64 people with the characteristics according to Table 1 (gender, age, and education).

**Table 1.** Demographics of participants

| Characteristics | | Frequency | Percentage, % |
|---|---|---|---|
| Gender | Woman | 31 | 48.4 |
| | Man | 33 | 51.6 |
| | **Amount** | **64** | **100** |
| Age, (year) | 25-34 | 20 | 31.2 |
| | 35-44 | 18 | 28.1 |
| | 45-54 | 13 | 20.3 |
| | 55-64 | 9 | 14.1 |
| | 65-74 | 4 | 6.2 |
| | **Amount** | **64** | **100** |
| Education level | No education | 10 | 15.6 |
| | Primary school | 10 | 15.6 |
| | Junior High School | 7 | 10.9 |
| | Senior High School | 19 | 29.7 |
| | Diploma-III | 8 | 12.5 |
| | Bachelor (sarjana) | 10 | 15.6 |
| | **Amount** | **64** | **100** |

Furthermore, people's behavior to prevent diarrhea was measured using a health behavior questionnaire instrument. Each observation result (pretest and posttest) was analyzed descriptively by presenting health behavior according to three criteria, less, enough, and good. Statistical analysis (pair-t test) was used to analyze differences in health behavior in the sample groups before and after treatment (counseling), at a significance level of 0.05. To conduct the paired t-test, parametric assumptions (data normality) must be met. The analysis was carried out using the help of the Statistical Program for Social Sciences (SPSS) 22.0 version.

## RESULTS AND DISCUSSION

The results of the pretest and posttest referring to people's behavior to prevent diarrhea are presented in Table 2. This was analyzed descriptively based on the number of participants who responded to the questionnaire that had been given to them.

**Table 2.** Community behavior to prevent diarrhea before and after counseling

| Behavior Criteria | Before PHBS Counseling | | After PHBS Counseling | |
|---|---|---|---|---|
| | Frequency | % | Frequency | % |
| Less | 24 | 37.5 | 2 | 3.1 |
| Enough | 28 | 43.8 | 29 | 45.3 |
| Good | 12 | 18.8 | 33 | 51.6 |
| **Amount** | **64** | **100.0** | **64** | **100.0** |

The results in Table 2 show that most of the respondents (N = 28, 43.8%) before the PHBS counseling (pretest) behaved "enough", then behaved less as much as 37.5%, and behaved "good" as much as 18.8%. After treatment (PHBS counseling), there was a difference in community behavior to prevent diarrhea, where most of the respondents after counseling behaved "good" (N = 33, 51.6%), and only 3.1% behaved "less."

**Table 3.** The results of paired-t test

| Group | | Mean | Std. Dev | Std. Err. Mean | t | df | sig |
|---|---|---|---|---|---|---|---|
| Pair 1 | Pre - Post | -0.672 | 0.592 | 0.074 | -9.073 | 63 | 0.000 |

Furthermore, it is analyzed the effect of PHBS counseling on changes in people's behavior to prevent diarrhea. This analysis was used after the normality test was carried out on the results of the pretest and posttest. The normality test shows that the data is normally distributed, then Table 3 shows the results of the pair-t test in each group. Based on the results of the paired-t test in Table 3, the sig value was found. is 0.000 (< 0.05), this means that there is an effect of PHBS counseling on people's behavior to prevent diarrhea.

The low PHBS behavior before counseling was influenced by several factors, one of which was the level of education where most of the respondents were uneducated. Education is one of the elements associated with a person's assertive behavior. Education level is one of the factors that can affect a person's knowledge about health (Raghupathi & Raghupathi, 2020). That is, the higher the level of education of a person, the better the level of knowledge he has. Knowledge is a very influential factor in decision making as well as an important domain in carrying out health actions or behavior. The relationship between education and health behavior has also been highlighted in developed countries, such as in the United States, individuals with low educational attainment suffer from poor health when compared to other highly educated populations (Zajacova & Lawrence, 2018). Differences in PHBS behavior are also due to differences in the relationship between education and health behavior across birth groups, because of course health and education trends continue to develop over time (Lynch, 2003).

Empirical health education has an impact on better PHBS behavior. This also proves that increasing knowledge will give significant results to improve behavior, and knowledge is a very important domain for the formation of behavior. Knowledge is a predisposing factor that influences a person's behavior, those with high knowledge are expected to behave positively in supporting their health. Clean and healthy living behavior is a reflection of a family's lifestyle that always pays attention to and maintains the health of all family members. All health behaviors are carried out with awareness so that family members can encourage themselves in the health sector and can play an active role in activities in the community. Health knowledge provides a detailed information about health, this is seen as a theoretical construct in society to care about many aspects of their health (Trevethan, 2017). Health knowledge extension conducted by external sources (who have health knowledge) characterizes objectivity, and it is ensured that the health information provided is factual (Harrell et al., 2005; Trevethan, 2017). The results of previous studies show empirical evidence of the effectiveness of health knowledge on disease prevention and promotion of

better health in the general population (Al-Shaikh et al., 2017; McCallum et al., 2006). Protective and preventive practices in health can only be carried out by the community if they have adequate knowledge about health (Manabe et al., 2012).

The results of the current study have clearly shown the effect of PHBS counseling on people's behavior to prevent diarrhea. Information on the effects of health behaviors on healthy living habits can inform stakeholder policy making regarding sustainable health promotion (Bryant, 2002). It is hoped that the results of this study can provide empirical evidence, so that the inculcation of health knowledge through counseling can continue to be carried out in a structured manner in the wider community.

## CONCLUSION

The results of the study have shown that the initial observation, before PHBS counseling, most of the people behaved "enough" in preventing diarrheal diseases. After the implementation of PHBS counseling, most of the community behaved "good" in preventing diarrheal diseases. That is, descriptively people's behavior changes in preventing diarrheal diseases with PHBS counseling. Statistically, this behavior change has been tested and it was found that there is an effect of PHBS counseling on people's behavior to prevent diarrhea.

## RECOMMENDATION

It is hoped that the results of this study can provide empirical evidence, so that the inculcation of health knowledge through counseling can continue to be carried out in a structured manner in the wider community.

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