

Prevention of Water Contamination as an Effort to Reduce the Incidence of Diarrhea in Pondok Pesantren Putri Wahid Hasyim Bangil

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Abstract

Wahid Hasyim Bangil Islamic Boarding School has thousands of students. With the large number of students who exist and live in one environment, it will certainly increase the incidence of diarrhea caused by water contamination and the incidence of diarrhea is very common in the cottage environment. Therefore, this activity aims to improve personal hygiene habits and Prevention of Water Contamination to reduce the Incidence of Diarrhea in PP Putri Wahid Hasyim Bangil. This community service which was held in June 2023 was attended by 40 participants from PP Putri Wahid Hasyim Bangil. Activities carried out in the form of providing education, character building of students and administrators with health games, and distribution of pretests and posttests. This study was conducted descriptively observational to see the response of participants by looking at the enthusiasm and increase in knowledge of participants using Wilcoxon test analysis. The results showed a p-value of 0.033. Because the value of $0.033 < 0.05$, it can be concluded that there is a difference between the knowledge of students before counseling (Pre-test) and after counseling (Post-test). There is an effect of providing counseling that has been carried out in community service activities at PP Putri Wahid Hasyim Bangil related to the Prevention of Water Contamination as an effort to reduce the Incidence of Diarrhea.

Keywords: Diarrhea; Water Contamination; Hygiene; Boarding School; Knowledge

Abstrak

Pondok Pesantren Wahid Hasyim Bangil, memiliki ribuan santri. Dengan banyaknya santri yang ada dan tinggal dalam satu lingkungan tentu akan meningkatkan Kejadian Diare yang diakibatkan kontaminasi air dan kejadian diare ini kental sekali terjadi di lingkungan pondok. Maka dari itu kegiatan ini bertujuan untuk meningkatkan kebiasaan personal hygiene dan Pencegahan Kontaminasi Air sebagai Upaya menurunkan Kejadian Diare di PP Putri Wahid Hasyim Bangil. Pengabdian masyarakat yang dilaksanakan pada bulan Juni 2023 ini dihadiri oleh 40 peserta dari PP Putri Wahid Hasyim Bangil. Kegiatan yang dilakukan berupa pemberian edukasi, Pembentukan karakter santri dan pengurus dengan games kesehatan dan pembagian pretest dan posttest. Penelitian ini dilakukan secara observasional deskriptif untuk melihat respon peserta dengan dilihat dari antusiasme dan peningknatan pengetahuan peserta dengan menggunakan analisis uji Wilcoxon. Hasil menunjukkan p-value bernilai 0.033. Karena nilai $0.033 < 0.05$, maka dapat disimpulkan bahwa ada perbedaan antara pengetahuan santri sebelum dilakukan penyuluhan (Pre-test) dan setelah dilakukan penyuluhan (Post-test). Terdapat pengaruh pemberian penyuluhan yang telah dilakukan pada kegiatan pengabdian kepada masyarakat di PP Putri Wahid Hasyim Bangil terkait Pencegahan Kontaminasi Air sebagai Upaya menurunkan Kejadian Diare.

Kata Kunci: Diare; Kontaminasi Air; Hygiene; Pondok Pesantren; Pengetahuan

INTRODUCTION

Diarrhea is a common illness at boarding schools. Some of the variables related to the prevalence of diarrhea include a lack of clean water, water tainted by feces, a lack of hygiene facilities, and students' clean living habits (Zulferdami, 2019). According to research, a lack of personal hygiene and environmental sanitation contribute to a significant effect on the prevalence of diarrhea (Purnama et al., 2021). Washing hands is one method of preventing the spread of diarrheal infections (Sabrina et al., 2020). So, it is critical to minimize water contamination to limit the prevalence of diarrhea in boarding schools. Water for drinking and cooking must originate from pure sources that have not been contaminated before storage. In addition, bathroom facilities must also be considered so as not to become a breeding ground for bacteria that cause diarrhea (Zulferdami, 2019). The Wahid Hasyim Bangil Islamic Boarding School has hundreds of students. Because of the large number of students who are present and live in one environment, diarrhea caused by water contamination will certainly rise, and it is very particularly in the boarding school environment. So students must be trained to implement personal hygiene habits and Prevention of Water Contamination to reduce the increase of diarrhea in Wahid Hasyim Bangil Islamic Boarding School.

GENERAL DESCRIPTION OF THE COMMUNITY, PROBLEM, AND TARGET SOLUTIONS

General Description

Wahid Hasyim Bangil Islamic Boarding School was established in 1955. Until now, this boarding school has many female students. This community program involves 40 female students who will be given education with material related to preventing *norovirus* contamination to reduce the incidence of diarrhea in boarding schools.

Problem

The Wahid Hasyim Bangil Islamic boarding school has thousands of female students. A large population density in a given environment increases the probability of health issues, one of which is the occurrence of diarrhea. Water contamination is one of the factors that might cause diarrhea. On this assumption, we believe that instructional activities for the boarding school community, particularly Santriwati, are required to reduce and avoid the occurrence of diarrhea in the boarding school

Table 1: Problem and solution

No	Problem		solution	Indicators of goal
1	Education: Knowledge level	Knowledge	Knowledge transfer Mentoring empowerment	Increase skor knowledge/skill/behavior

Target solution

METHODS

The community program, held in June 2023, was attended by 40 Wahid Hasyim Bangil Islamic Boarding School students. This program was implemented by offering instruction on cleaning yourself and personal hygiene, as well as the prevention of water contamination, to reduce the incidence of diarrhea in PP Putri Wahid Hasyim Bangil. Character development of students and

administrators through health games connected to water contamination and the prevalence of diarrhea, as well as the distribution of pretest and posttest. This study was carried out in a descriptive observational method to examine changes in participants' knowledge from the pretest and posttest administered, as well as the participants' enthusiasm. Implementation of community service activities for Wahid Hasyim Bangil Islamic Boarding School to improve Santri's awareness of the importance of personal hygiene due to the increase risk of diarrhea. This community service is concerned with health issues and services. The implementation of this community service activity consists of various elements or phases, the first of which is a survey of the target group to gather information about the location and other aspects of the target area.

The following step is to prepare facilities and infrastructure by developing questionnaires, materials, and service tools. The service team group collaborated with the boarding school team to prepare conceptual and operational execution, as well as each member's job description, determination, and recruitment of training participants. The last phase is the implementation of activities carried out by visiting partners and community service activities in the form of providing education related to personal hygiene and personal hygiene, as well as preventing water contamination as an effort to reduce the incidence of diarrhea in Wahid Hasyim Bangil Islamic boarding school. Character building for Santriwati and administrators with health games related to preventing water contamination and diarrhea incidence. The last activity is to distribute pre-tests and post-tests to determine the level of knowledge of participants before and after the material is given

RESULTS AND DISCUSSION

According to Wijaya (2019), contaminated water can have a significant influence on public health, including an increase in the incidence of diarrhea. As a result, it is critical to maintain adequate water quality and prevent water contamination in boarding schools. Windy's (2022) research revealed that bacteria in the air might induce symptoms of different diseases, including diarrhea. As a result, keeping the air clean in the boarding school environment is critical. Based on the findings of the research and information presented above, it is possible to infer that Water Contamination Prevention is an important effort to lower the prevalence of diarrhea in boarding schools. Students at Wahid Hasyim Bangil Islamic Boarding School learned about diarrhea disease material caused by water contamination during the community program so that they can be more aware of the health of those around them, particularly the dangers of consuming contaminated water which may damage the body's immunity. Students were given questionnaires on herbal plants at the beginning and end of the presentation to assess their understanding of diarrhea caused by water contamination before and after counseling. Table 1 shows data from the Pre-Test and Post-Test findings that were assessed using the Wilcoxon test analysis because the data were not normally distributed.

Table 2: Results of pre-test and post-test data analysis using the Wilcoxon test

Test Statistic	p-value
Wilcoxon Signed Ranks Test	0,033

This finding is consistent with Hildawati's research (2021), which found variations in pre-test and post-test knowledge of drinking water management in the village before and after counseling

(Hildawati et al., 2021). Another study found variations in food and beverage sanitation hygiene knowledge and practice before and after counseling (Ningsih, 2014). Water pollution can have significant implications for public health. Water contamination has been linked to a variety of diseases, including skin, digestive, and respiratory issues, diseases of the eyes, and Infectious illnesses. Oil and chemical spills, industrial waste, taking too much groundwater, pesticide fertilizer contamination, and other chemicals and toxic substances can all contribute to water pollution. (Perhimpunan Dokter Umum Indonesia, 2022). Therefore, it is important to make efforts to prevent water pollution to maintain public health and the environment (DLH Probolinggo, 2019). Water contamination in boarding schools can have adverse effects on public health. Wastewater in boarding schools is weak and can cause pollution (Fahham, 2019). Domestic waste from households in boarding schools can cause pollution and environmental damage. Environmental management in boarding school areas can be done to prevent potential water pollution (Ministry of Environment and Forestry, 2020).

CONCLUSION AND SUGGESTIONS

There is an effect of giving counseling in the community program at Wahid Hasyim Bangil Islamic Boarding School related to Water Contamination Prevention as an Effort to Reduce Diarrhea Incidence in 2023. This Community Service activity has been very beneficial in increasing health-related knowledge among the students of Wahid Hasyim Bangil Putri Boarding School about Preventing Water Contamination as an Effort to Reduce the Incidence of Diarrhea, as evidenced by their high enthusiasm and changes in knowledge. Students are required to comprehend the risks that can befall them, particularly in terms of personal health. This is expected to modify students' knowledge and behavior for them to maintain and improve their health.

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