Impact of Development "Green School" Program on Hygiene Behavior Domain at Barusari 1 and Barusari 4 Primary School, Indonesia

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A. Introduction

In the scope of school sanitation services in addition to building physical facilities, another important thing is the development of supporting sanitation and hygiene education [1]. Elementary school students in Indonesia only get 53-80% of learning subjects that discuss the environment, especially the topic of water and sanitation. Of all students who take part in the learning process, only 50-60% of students effectively practice the material provided [2]. Schools are an effective forum for changing the behavior of young people to care for and love the environment, and to actively participate in preserving the environment. Compared to adults, children are often more receptive to new ideas and can more easily change their behavior and/or develop new long-term behaviors as a result of increased knowledge and facilitated practices [3]. Based on "Theory Preceed-Proceed - Lawrence Green", research, hygiene behavior in a person, especially children, is the result of several factors, namely predisposing factors (knowledge, attitudes, and practices), enabling factors (facilities, facilities, and training) and reinforcement factors (support from the environment) [4].

Schools that do not provide a supportive environment and learning materials about the importance of sanitation and hygiene practices cause children to have low knowledge and awareness of sanitation and hygiene [4]. To improve the knowledge and practice of clean and healthy living, an intervention program effort on health education and hygiene is a very useful solution [5]. Since 2017, Primary School Barusari 1 and 4, Garut District have implemented sanitation and hygiene education in the form of water, sanitation and hygiene school development through the "Green School" program. this was proven that the intervention of the WinS (WASH in Schools) program in schools can produce positive changes in student behavior, specifically increasing toilet use and washing hands [6]. This study aims to assess and describe the knowledge, attitudes, and practices of hygiene behavior that are influenced by the green school program intervention at Barusari 1 and Barusari 4 Primary School. Based on that we can see how effective the interventions so that it can be developed in other areas that have similar criteria.

B. Methodology

The research design used in this study is quasi-experimental research. Research the methodology used in the analysis is quantitative method of questionnaire test with non-parametric statistical analysis (Wilxocon) [5]. The non-parametric statistical analysis was conducted to examine differences in the variables of knowledge, attitudes, and practices before and after the intervention. The research instrument used was a questionnaire based on the material given during the intervention related to the knowledge, attitudes, and practices that students must do regarding hygiene and sanitation behavior in the environment.

Sampling method that used in this research is purposive sampling because the sample that used at quasi-experimental research was not a random sample but a sample that was treated and had certain criteria. The sample criteria selected were students in grades 1 to 6 who were selected to be environmental ambassadors during the program. Environmental Ambassadors are selected by the program implementer at the start of the program.

Quantitative data analysis was done quantitatively with instrument test stages, normality test data with Kolmogrov-Smirnov statistical test (dF> 50), and hypothesis testing with non-parametric tests namely Wilxocon In hypothesis testing, the test results are compared with the basis of the decision used in Wilxocon Test which is used as a guide in making conclusions. The basis for drawing conclusions in the Wilxocon test are as follows:

1. If the value of Asymp.Sig. (p) less than <0.05, the hypothesis is accepted
2. If the Asymp.Sig value. (p) greater than> 0.05, the hypothesis is rejected

C. Barusari Village "Green School" Program

This program is a multi-stakeholder collaboration in community-based environmental management, namely UNINUS academics through community service programs, the Star Energy Geothermal Darajat II, Ltd. company through the CSR Corporate Social Responsibility program and the government, namely the Garut District Education Office.The model is implemented based on the principle of school empowerment partnership and the principle of environmental management. The purpose of this program is a social engineering effort in the field of education and environment that is systematic, comprehensive and sustainable with multistakeholder participation to make young people living around the Barusari Village area able to live healthy, creative lives while maintaining and preserving the Barusari Village area, caring for environmental conditions, especially water, sanitation, and hygiene, are agents of change that are able to maintain environmental hygiene and health both at school and at home [6].

The school chosen to be the location for the environment-based school model in the Darajat protected forest area is elementary schools 1 and 4 Barusari. The standard that used in the development of green school program at Elementary School Barusari 1 and 4 are adopt the standard in the Adiwiyata school standard that consists of four component, namely: 1) Enviromental Policy, 2) Implementation of enviromentali-based curriculum, 3) participatory based envriomental activities, and 4) environmental friendly infrastructure and facility management [3].

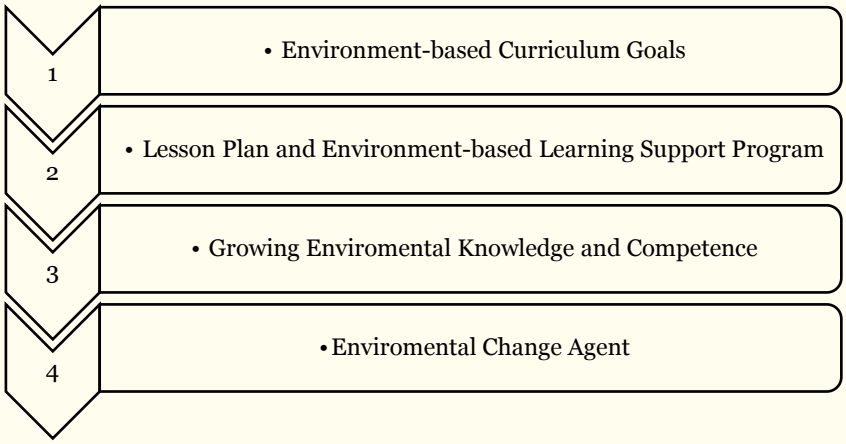

Figure 1. The Process of Implementing an Enviromental-Based Curriculoum [6]

D. Result

Kolmogorov-Smirnov Normality Test on research data states that the data are not normally distributed. Thus the method of analyzing the difference in the average value of knowledge, attitudes, and practices of hygiene behaviour before and after the intervention in the selected intervention group and control group is the Wilcoxon non-parametric statistical test. Based on the output in Figure 2, the results show that there was a significant increase in the mean value of knowledge, attitudes, and practices from pre-test to post-test at 72 student in Barusari 1 and Barusari 4 Primary School.

Based on the results of the pretest to posttest data, there are 72 positive data on each variable (N) which means all data has increased in the score from the pre-test to the post-test. From the results of data processing using the Wilxocon test, the result of Asymp.Sig (2-tailed) on the knowledge, attitude, and practice of hygiene behaviour and basic sanitation for the 72 student in Barusari 1 and Barusari 4 Primary School is less than <0.05, so it can be concluded that the hypothesis is accepted. This means that there are differences in the results of knowledge, attitudes, and practices of hygiene and sanitation behavior domain (knowledge, attitude and practice) of the 72 student in Barusari 1 and Barusari 4 Primary School for the Pre-Test and Post-Test. The differences referred to indicate the influence of the development of green school models in Barusari Primary School 1 and 4 on the knowledge, attitudes, and practices of hygiene behaviour domain for students.

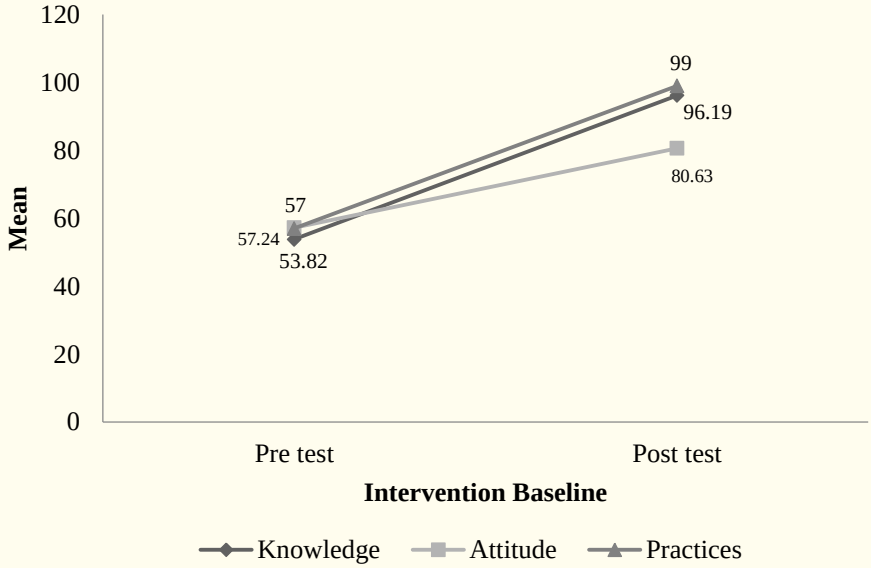

Figure 2. Mean Value Behavior Domain (Knowledge, Attitude, and Practice) Barusari 1 and Barusari 4 Primary School [6]

In the knowledge variable, the increase that occurs is in accordance with the results of one of latest research, that there is an increase in children's knowledge related to basic concepts of environmental sanitation and personal hygiene after additional education about the environment through programs in elementary schools in Enugu [7]. The increase in sanitation and hygiene knowledge that students have can be caused by changes in environmental conditions caused by the intervention program [5]. The existence of a supportive environment will give a positive response to students in absorbing knowledge in sanitation and hygiene. With the help of the "Green School" intervention program, children's cognitive abilities are trained by providing material through counseling and simulations so that children can directly imagine the materials provided during the simulation.

The results showed that all of the attitudes had increased from pre-test to post-test. The increase in attitudes that occurred is in accordance with one of the latest research, which states that clean water and sanitation-based schools in Nyanza Province, Kenya can increase positive attitudes in maintaining personal habits including water and sanitation after the program is implemented [8]. The high level of knowledge and practice related to personal hygiene and sanitation in the children studied could be linked to the teaching of hygiene and sanitation education provided to children. The expert, states that increasing behavior does not always lead to positive practice if it is not supported by the development of knowledge, attitudes and beliefs in a person [7]. The increase in behavioral domains (knowledge, attitudes, and practices) that support the increase in students' hygiene behavior is due to the existence of a supportive environment in the form of interventions that influence the process of knowledge entry into children due to reciprocal interactions that will be responded to as a form of knowledge, attitudes, and actions by every child [9].

Behavior changes can occur related to changes in knowledge, attitudes and skills that interact with each other. These three things can be influenced or changed through a process of learning, practice and experience, including school age children. How the program is carried out can be one of the reasons students find it easier to accept the new material that is given and apply it in everyday life. This is consistent with the research explanation, that learning and development are better and more useful when stimulated interactively [10]. In this program, students are accustomed to be more active and given the responsibility to maintain personal hygiene and cleanliness of their school in a creative way. Based on psychology and education theory, it is explained that the approach used in this program is using the gentle discipline, namely learning activities and giving knowledge to solve a problem without punishing actions but emphasizing realistic expectations of changing children's behavior according to their level of development and ability. Educational patterns with this approach can encourage children to think more positively about the knowledge they receive so that it can be easy to apply and able to inspire children to do good things and change their behavior [11].

Conclusion(s)

Based on the results of program evaluation through with non-parametric statistical analysis (Wilxocon Test), it was found that there was a positive influence given by the environment-based school program (Green School) on the student hygiene behavior domain (Knowledge, Practice, Behavior). That was proved by increasing the mean value at pre-test to post-test from the domain of student hygiene behavior and the results of data processing using the Wilxocon test, the result of Asymp.Sig (2-tailed) on the knowledge, attitude, and practice of hygiene behaviour and basic sanitation for the 72 student in Barusari 1 and Barusari 4 Primary School is less than <0.05 so the hypothesis was accepted.

How the program is carried out can be one of the reasons students find it easier to accept the new material that is given and apply it in everyday life. Because of that, innovative and interactive learning through the gentle discipline approach factor in the learning process on this program has an effect that influence the increasing student hygiene behavior domain. When a child is exposed to information and practices regarding sanitation and hygiene, the chances of other people getting information related to sanitation and hygiene from them are very high because they become effective messengers for change in their family and their environment. Based of the positive result form this research, so this “Green School” model with innovative and interactive learning through the gentle discipline approach is feasible to be developed for other schools with similar criteria as an effort to increase the student hygiene behavior.

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