Research Article

EXPERIMENTAL RESEARCH TO IMPROVE COMMUNITY KNOWLEDGE, ATTITUDE, AND BEHAVIOR IN PROCESSING HOUSEHOLD WASTE IN THE COASTAL AREA OF PANGKEP REGENCY

*Andi Yusdi Dwi Asta, Bakhrani Rauf, Faizal Amir, Rahmansah, Zainuddin and Mithen Lullulangi

Lecturers, Faculty of Engineering, Universitas Negeri Makassar Makassar

Abstract

The objectives of the study were: (1) to determine the knowledge, attitudes, and behavior of the community in managing household waste before and after the experiment in the coastal area of Pangkep Regency, (2) to determine the effect of the experiment on waste management on increasing the knowledge, attitudes, and behavior of the community in managing waste in the coastal area of Pangkep Regency, (3) to determine the effect of the experiment whose material was about the procedures for managing waste that is healthy and safe for the environment in the coastal area of Pangkep Regency. This research is classified as quantitative research and the approach used is experimental research. The location of the research is Labakkang District, Pangkep Regency. Respondents totaling 25 heads of families were selected using the purposive sampling method. The experimental design used was One Group Pretest-postest Design (Borg and Gall, 2008). The research variables were: (1) knowledge about waste, (2) attitudes towards managing waste, and (3) behavior in managing waste before and after the experiment. The data analysis techniques used were: (1) Descriptive statistical analysis, and (2) inferential statistical analysis. The analysis model used was the difference test (dependent t test). The results of the study showed that: (1) the knowledge, attitudes, and behavior of the community in managing household waste in the coastal areas of Pangkep Regency before the experiment was carried out were in the low category, (2) the knowledge, attitudes, and behavior of the community in managing household waste in the coastal areas of Pangkep Regency after the experiment was carried out were in the high category. (3) the influence of the experiment whose material was about the procedures for managing waste that is healthy and safe for the environment in the coastal areas of Pangkep Regency had a very significant influence.

Keywords: Knowledge; Experiment; Attitude; Waste; Managing, Behavior.

INTRODUCTION

Environmental Protection Law No. 23 of 1997 Article 3 states that environmental management carried out with the principles of state responsibility, sustainability, and benefits aims to realize environmentally friendly sustainable development in order to build the whole Indonesian people and the development of all Indonesian society who believe and fear God Almighty. Furthermore, Law of the Republic of Indonesia No. 32 of 2009 concerning Environmental Protection and Management explains that the environment consists of biotic and abiotic components where the environment needs to be maintained and preserved. A preliminary study conducted in Alatengae Village 2023 found: (1) people generally dispose of household waste in their yards, (2) people who have less have a temporary waste disposal site in the form of a landfill in their yards, and (3) people have not tried to use household waste as organic fertilizer. Research conducted in the Walanae River Basin (DAS Walanae) 2018 showed that people's behavior in managing household waste was classified as moderate. In addition, it was found that knowledge about waste, attitudes towards the environment, and motivation to maintain the environment were also classified as moderate and had a positive effect on people's behavior in managing waste. Kholil (2004) stated that the human factor as the dominant actor holds the main key in waste management. Behavioral theory by Hines, et al. (2010) and Hungerford and Volk, (1990), better known as responsible environmental behavior, states that behavior is influenced by various factors.

These factors are: (a) personal factors, including attitudes and motivation; (b) knowledge of the issue; (c) acting skills, (d) skills in applying knowledge, and (e) other situational factors. Based on all the descriptions above, experimental research to improve people's knowledge, attitudes, and behavior in managing waste responsibly in Bantimurung District, Maros Regency is interesting to do. Increasing people's behavior in Bantimurung District, Maros Regency in managing waste will have a positive impact on environmental cleanliness and improve environmental quality in a sustainable manner.

The problems in this study are as follows: 1) How is the knowledge, attitude, and behavior of the community in managing household waste before and after the experiment in the coastal area of Pangkep Regency? 2) Does the experiment on waste management have an effect on increasing the knowledge, attitude, and behavior of the community in managing waste in the coastal area of Pangkep Regency? And 3) 3. Is there an effect of the experiment whose material is about the procedures for managing healthy and safe waste for the environment in the coastal area of Pangkep Regency?

The objectives of the first year of research are as follows: 1) To determine the knowledge, attitudes, and behavior of the community in managing household waste before and after the experiment in the coastal area of Pangkep Regency, 2) To determine the effect of experiments on waste management on increasing the knowledge, attitudes, and behavior of the community in managing waste in the coastal area of Pangkep Regency, and 3) To determine the effect of experiments whose material is about procedures for managing waste that are healthy and safe for the environment in the coastal area of Pangkep Regency.

*Corresponding Author: *Andi Yusdi Dwi Asta,*
Lecturers, Faculty of Engineering, Universitas Negeri Makassar Makassar

LITERATURE REVIEW

Sarwono (2007) stated that behavior is an activity or activity of the organism concerned, which can be observed directly or indirectly. Notoatmodjo (2007) stated that behavior is interpreted as an action-reaction of an organism to its environment. Jiang, et.al., (2012) stated that behavior is an individual's action or reflection caused by psychological aspects, such as knowledge, perception, intention, desire and attitude. Furthermore, it is said that behavior is influenced by internal and external factors. Notoatmodjo (2007) stated that knowledge is memory or what is known about materials that have been studied which are based on scientific reasoning. Suriasumantri (2010) and Soekanto (2007) stated that knowledge is essentially everything we know about a particular object including science. Notoatmodjo (2007) stated that the components of knowledge consist of three parts, namely cognitive, affective, and psychomotor.

In Law No. 32 of 2009 concerning Environmental Protection and Management states that the environment is a unity of space, and all objects, power, conditions and living things, including humans and their behavior that affect the continuity of life and the welfare of humans and other living things. Soerjani, et al. (2007), stated that the environment is a life system in which there is human intervention in the ecosystem order. Azwar (2013) stated that attitude is a certain regularity in terms of feelings (affection), thoughts (cognition), and predisposition of action (conation) of a person towards the surrounding environment. Abu Ahmadi (2007) basically stated that attitude is a tendency to respond and behave in a certain way towards certain objects. Azwar (2012); Mar'at (2006); stated that the components of attitude consist of: (a) cognitive components related to beliefs, ideas, and concepts, (b) affective components concerning a person's emotional life, and (c) conation components which are tendencies to behave.

RESEARCH METHODS

This research is classified as experimental research. The research location is Labakkang District, Pangkep Regency. A sample of 25 heads of families (KK) was selected using the purposive sampling method, namely people who can read and write well, are motivated to take training, and have time to take training or experiments. The experimental design used is One Group Pretest-postest Desigen (Borg and Gall, 2008). The experimental steps are as follows: (1) conducting an initial test before the experiment, (2) conducting an experiment with counseling and training, and (3) conducting a final test to determine the effect of counseling and training on increasing knowledge about waste, attitudes towards waste management, and behavior in managing waste responsibly and sustainably.

The research variables in this study are as follows: 1) The implementation of the experiment is called the independent variable whose material is the procedure for healthy and environmentally friendly waste processing. 2) 2. The dependent variables are: (a) knowledge about household waste, (b) attitudes towards managing household waste, and (c) behavior in managing household waste before and after the experiment. Data collection was done by giving tests and questionnaires before and after the experiment. The data analysis techniques used were descriptive statistical analysis and inferential statistical analysis. The inferential statistical analysis model is the Dependent t-Test.

RESULTS AND DISCUSSION

Research Results

Community knowledge of managing household waste before being given training or experiments on how to manage household waste that is healthy and safe for the environment shows that the knowledge is in the low category. After the experiment, it is in the high category. The community's attitude in managing household waste before being given training or experiments on how to manage household waste that is healthy and safe for the environment shows that the attitude is in the low category. After the experiment, it is in the high category. The community's behavior in managing household waste before being given training on how to manage waste that is healthy and safe for the environment shows that the behavior is in the low category. After the experiment, it is in the high category. To determine the effect of the experiment on increasing community knowledge in managing household waste in the coastal area of Pangkep Regency, the following are the results of the dependent t-test analysis in Table 1.

Table 1. Results of the t-test analysis of the influence of the experiment on increasing knowledge of managing household waste

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
R = 0.92	11.24	.001	.002	7.24	15.24	35.42	24	.000

Based on the results of the analysis (Table 1) it is significant t = 0.000 <α = 0.05 with a value of t = 35.42. This means that the experiment has an influence on increasing public knowledge of managing household waste in the coastal area of Pangkep Regency. Correlation coefficient = 0.92 or determination coefficient = 0.846. This determination coefficient shows that the influence of the experiment on increasing public knowledge of managing household waste in the coastal area of Pangkep Regency is 84.60%. This influence is quite large and very significant.

To determine the influence of the experiment on increasing public attitudes towards managing household waste in the coastal area of Pangkep Regency, the following are the results of the dependent t-test analysis in Table 2.

Table 2. Results of the t-test analysis of the influence of the experiment on improving attitudes towards managing household waste

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
R = 0.879	62,72	.0022	.0012	45,24	80,21	36.38	24	.000

Based on the results of the analysis (Table 2), it is significant t = 0.000 <α = 0.05 with a t value of 36.38. This means that the experiment has an influence on improving people's attitudes towards managing household waste in the coastal area of Pangkep Regency. Correlation coefficient = 0.879 or determination coefficient = 0.773. The determination

coefficient = 0773, this figure shows that the influence of the experiment on improving people's attitudes towards managing household waste in the coastal area of Pangkep Regency is 77.30%. This influence is quite large and very significant. To determine the influence of the experiment on improving people's behavior in managing household waste in the coastal area of Pangkep Regency, the following is the result of the dependent t-test analysis in Table 3.

Table 3. Results of the t-test analysis of the influence of the experiment on improving household waste management behavior

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
R = 0.859	62.76	.002	.001	45.21	80.32	38.33	24	.000

Based on the analysis results (Table 3) it is significant t = 0.000 <α = 0.05 with a value of t = 38.33. This shows that the experiment has an influence on improving people's behavior in managing household waste in the coastal area of Pangkep Regency. Correlation coefficient = 0.859 or determination coefficient = 0.737. The determination coefficient = 0.737, this figure shows that the influence of the experiment on improving people's behavior in managing household waste in the coastal area of Pangkep Regency is 73.70%. This influence is quite large and very significant.

DISCUSSION

Community knowledge of managing household waste before being given training (experiment) on how to manage household waste that is healthy and safe for the environment is in the low category. After the experiment, it increased to high. This increase is due to the experimental treatment or the community gaining knowledge about how to manage waste that is healthy and safe for the environment. The knowledge gained by the community starts from collecting household waste, sorting waste, and finally disposing of household waste in a place that does not have a negative impact on the environment. The community's attitude in managing household waste before being given training (experiment) on how to manage household waste that is healthy and safe for the environment is in the low category. After the experiment, it increased to high. This increase is due to the community's knowledge about how to manage household waste that is healthy and safe for the environment. Community knowledge of managing household waste that is healthy and safe for the environment is due to the experimental treatment or the community gaining knowledge about how to manage waste that is healthy and safe for the environment. The knowledge gained by the community starts from collecting household waste, sorting waste, and finally disposing of household waste in a place that does not have a negative impact on the environment. The existence of this knowledge changes the public attitude to be positive or high towards the procedure for managing waste that is healthy and safe for the environment.
The behavior of the public in managing household waste before being given training (experiment) on the procedure for managing household waste that is healthy and safe for the environment is in the low category. After the experiment was carried out, it increased to high. This increase was caused by the knowledge and attitude of the public about the procedure

for managing household waste that is healthy and environmentally friendly. The knowledge and attitude of the public in managing household waste that is healthy and safe for the environment was caused by the experimental treatment or the public gaining knowledge about the procedure for managing waste that is healthy and safe for the environment. The knowledge obtained by the public starts from collecting household waste, sorting waste, and finally disposing of household waste in a place that does not have a negative impact on the environment. The existence of this knowledge and attitude changes the behavior of the public to be good or high in managing household waste that is healthy and safe for the environment.

Conclusion

Based on the description that has been presented in the previous chapter, the conclusions of this study are as follows: 1) Knowledge, attitudes, and behavior of the community in managing household waste in the coastal area of Pangkep Regency before the experiment was carried out were in the low category, 2) Knowledge, attitudes, and behavior of the community in managing household waste in the coastal area of Pangkep Regency after the experiment was carried out were in the high category, and 3) The implementation of the experiment whose material was about the procedures for managing waste that is healthy and safe for the environment in the coastal area of Pangkep Regency had a positive influence on increasing the knowledge, attitudes, and behavior of the community in managing household waste that is healthy and safe for the environment.

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