

Relationship between Knowledge Level and Family Participation in Household Waste Management in Baginda Village in 2024

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ABSTRACT

Household waste is one of the problems faced by Sumedang Regency, the cause is the increase in solid waste or garbage, causing problems with the quality of environmental media (water, soil and air). Knowledge or cognitive is a very important domain for the formation of a person's practice or action. Participation is a tool to achieve predetermined goals by emphasizing the psychological aspect that can encourage a person to take certain actions. The purpose of this study was to determine whether there is a relationship between the level of knowledge and family participation in household waste management in Baginda Village in 2024. The study used a quantitative method with a cross-sectional approach and 96 respondents were selected through accidental sampling techniques. Based on the Spearman rank test, the significance value (p-value) is 0.833 (sig> 0.05) which shows that there is no statistically significant relationship between the level of knowledge and family participation in household waste management.



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1. INTRODUCTION

According to the World Bank report entitled The Atlas of Sustainable Development Goals 2023, Indonesia is recorded as the 5th largest waste producing country with waste production of 65.2 million tons. According to the National Waste Management Information System (SIPSN) throughout 2023, Indonesia recorded 16.14 million tons of waste produced. Based on its source, household waste has the largest percentage with a figure reaching 38.1%. Meanwhile, based on its type, organic waste is in the highest position with a percentage of 53.1% consisting of 41% food waste, and 12.1% wood, twigs, and leaves. Then as much as 30.82% of the total waste generation has not been managed properly (KLHK, 2024).

During 2023, the Ministry of Environment and Forestry recorded that there had been fires in 35 landfills in several regions in Indonesia, with the majority of landfills that were burned still using the open dumping system with the condition of the waste still mixed with the largest composition of easily decomposed waste which is a source of methane gas (CH₄), one of the strongest Greenhouse Gases (GHG). According to Ujang Solihin, Head of the Sub-Directorate of Goods and Packaging, Directorate of Waste Management, Ministry of Environment and Forestry in an online press conference regarding the 2021 HPSN Commemoration from 514 districts/cities in Indonesia, the waste management capacity of 514 districts/cities in Indonesia is on average below 50 percent, except in big cities, it is already 70-80 percent (Indonesia.go.id, 2021).

In 2021, the final disposal site in Cibeurem Village, Cimalaka District, Sumedang Regency, exceeded its capacity or was overloaded. Every day, hundreds of tons of community waste are received here. Thus, an

average of 345 tons of waste is produced every day (detiknews.com, 2021). The capacity of the landfill which has reached its capacity in many areas shows that waste management in Indonesia is at a critical point. This situation is exacerbated by the large amount of waste produced without optimal management, causing various environmental, sanitation and health problems. As a result, in October 2023, the Cibeureum TPA experienced another fire, which was suspected to be due to waste burning activities and hot weather factors according to the Head of the Sumedang Satpol PP Fire Department, Cece Ruhiyat (TribunJabar.id, 2023).

According to the Head of Waste Management, DLHK Sumedang Regency, waste management at the Cibeurem TPA still uses the open dumping method or by piling up waste until finally burning waste occurs. Environmentally, waste management in Sumedang is still below standard or does not meet standards.

2. METHOD

In this study, using a quantitative approach and using a cross-sectional research design . The sample in this study amounted to 96 families in Baginda Village with an accidental sampling technique. Data analysis using the Spearman rank test. Data collection in this knowledge uses a questionnaire and meets respondents directly in the field that meets the criteria. This study aims to determine whether there is a relationship between the level of knowledge and family participation in household waste management in Baginda Village in 2024.

3. RESULTS AND DISCUSSION

3.1. Results

Tabel 1 Level of Knowledge

<i>Level of Knowledge</i>	<i>Frequency</i>	<i>Percent (%)</i>
Not enough	0	0.0
Enough	13	13.5
Good	83	86.5
Total	96	100.0

Based on the results of the statistical test, the results show that the average level of family knowledge about waste management is in the good category (86.5%).

Tabel 2 Family Participation

<i>Family Participation</i>	<i>Frequency</i>	<i>Percent (%)</i>
Low	76	79.2
Tall	20	20.8
Total	96	100.0

The results of this study show that the average family participation in household waste management is in the low category (79.2%), and in the high category (20.8%). This shows that the majority of family participation in household waste management in Baginda Village is in the low category.

Tabel 3 Relationship between Knowledge Level and Family Participation in Household Waste Management in Baginda Village in 2024

Family Participation	Knowledge						Total		P Value
	Not enough		Enough		Good				
	n	%	n	%	n	%	N	%	
Low	0	0	10	10.4	66	68.8	76	79.2	0.833
Tall	0	0	3	3.1	17	17.7	20	20.8	
Total	0	0	13	13.5	83	86.5	96	100	
Level of confidence -0.022									

From the statistical test results From the statistical test results Spearman's rho P value = 0.833 (Sig> 0.05) shows that there is no significant relationship between the level of knowledge and family participation in waste

management. A very weak and negative correlation (-0.022) shows that increased knowledge is not closely related to increased family participation in household waste management.

3.2. Discussion

1. Knowledge Level Overview

The results of the study showed that the average level of family knowledge of waste management was (86.5%), and the level of knowledge was sufficient (13.5%). The majority of families in Baginda Village have a good level of knowledge of household waste management.

Knowledge is nothing but the result of knowing, and this happens after people sense a certain object. Knowledge or cognitive is a very important domain for the formation of a person's actions (Soekidjo Notoatmodjo, 2003:127) in Fitrul Kamal (2009). Knowledge is one aspect that is measured to determine the community's understanding of waste management. But after the community knows, it is not necessarily that they take action.

This is reinforced by the opinion of Ayu Intan Sari (2020) that good knowledge and bad behavior in waste management are caused by a lack of information on how to manage waste properly. Even though someone has an attitude or belief that cares about the environment, there is no information about their beliefs. Information is a factor that can influence a person's knowledge. However, this is not in line with the results of Khodijah Tussolihin Dalimunthe's research with the results of statistical tests obtained a p-value of 0.002 ($p < 0.05$) indicating that there is a relationship between knowledge and waste management.

Increasing understanding and knowledge about waste management in the community will have a very good impact on their behavior, the cause of a person's behavioral change to be environmentally friendly (pro environmental behavior) is information that is specific to the expected field. The information needed by the community is not only information that encourages the community to change behavior.

2. Family Participation Overview

The results of the study showed that the average family participation in household waste management was in the low (79.2%) and high (20.8%) categories.

According to Santosa (1998:13) in Nur Rahmawati Sulistiyorini (2015) that participation is defined as a mental/thought and emotional/feeling characteristic of a person in a group situation that encourages him/her to contribute to the group in an effort to achieve goals and share responsibility for the efforts concerned. This definition emphasizes that participation is a tool to achieve predetermined goals by emphasizing the psychological aspects that can encourage a person to take certain actions in order to achieve goals.

This is also not in accordance with the theory put forward by Soekidjo Notoadmodjo (2003:128), which states that a person carries out behavior or actions due to the knowledge and attitudes he has. Knowledge or cognitive is a very important domain for the formation of a person's practice or action. This study is in line with the results of Amayati's (2022) study which stated that there was no relationship between knowledge and participation in family waste management as evidenced by the results of the chi-square statistical test where $p = 0.931$ ($\text{sig} > 0.05$).

3. The Relationship between Knowledge Level and Family Participation in Household Waste Management in Baginda Village in 2024

Based on the results of the Spearman rank statistical test that has been carried out, it was found that the correlation between the level of knowledge and family participation in household waste management is very weak and negative with a correlation coefficient value of -0.022. The significance value (p-value) is 0.833 ($\text{sig} > 0.05$) which indicates that there is no statistically significant relationship between the two variables. Therefore, it can be concluded that there is no real relationship between the Level of Knowledge and Family Participation in Household Waste Management in Baginda Village in 2024 in this study sample.

From the results of the study it can be seen that although the majority of respondents (86.5%) have good knowledge about household waste management, most of them (79.2%) still have low participation in waste management. A very weak and negative correlation (-0.022) shows that increasing knowledge is not closely related to increasing family participation in household waste management. This indicates that there may be other factors that are more influential in determining family participation in waste management other than the level of knowledge.

Knowledge is nothing but the result of knowing, and this happens after a person senses a certain object. Knowledge or cognitive is a very important domain for the formation of a person's actions (Soekidjo Notoatmodjo, 2003:127). According to Santosa (1998:13) in Nur Rahmawati Sulistiyorini (2015) that participation is defined as a mental/thought and emotional/feeling characteristic of a person in a group situation that encourages him to contribute to the group in an effort to achieve goals and take responsibility for the efforts concerned. This definition emphasizes that participation is a tool to achieve predetermined goals by

emphasizing the psychological aspects that can encourage a person to take certain actions in order to achieve goals.

This is not in accordance with the theory (Green, 2012) predisposing factors include age, length of service, education, knowledge, attitude, belief, hobby, skills (training) and self-confidence in the results to be achieved. Knowledge and attitude according to Lawrence Green's theory (1991) are predisposing factors in changes in human behavior. Predisposing factors are factors that exist within a person. Knowledge will play a role in the actions taken. The knowledge obtained by the community can be obtained through the surrounding environment such as family, information media, and socialization of health workers. In this case, a person's level of knowledge is related to community participation in disposing of waste, meaning that the higher a person's knowledge, the higher the community's behavior in managing waste bins (Selomo et al., 2016).

This is also not in accordance with the theory put forward by Soekidjo Notoadmodjo (2003:128), which states that a person carries out behavior or actions due to the knowledge and attitudes he has. Knowledge or cognitive is a very important domain for the formation of a person's practice or action.

This study is in line with the results of Amayati's study (2022) which stated that there was no relationship between knowledge and participation in household waste management as evidenced by the results of the chi-square statistical test where $p = 0.931$ ($\text{sig} > 0.05$). On the other hand, the results of the study according to Dewa Ayu Agustini showed that there was a significant relationship between knowledge and community participation in household waste management with a determination of 20.6% or $p = 0.000$ ($\text{sig} > 0.05$).

The results of the field study showed that the level of knowledge possessed by the community about waste, types of waste, how to dispose of waste, and how to manage waste is good because they already know what waste is, types of waste and how to manage waste. Community knowledge about household waste management is influenced by how much information about how and the benefits of managing waste is obtained.

Basically, the people of Baginda Village are not yet fully aware of the importance of waste sorting in the environment and the benefits of waste sorting for health and the environment. However, the assumption of residents that waste management is troublesome, expensive, and waste management is considered only the business of cleaning staff is the main reason why residents are not yet fully aware of managing the household waste they produce. In fact, waste management is a shared responsibility, including the community that produces the waste. Community-based waste management is one alternative in reducing the volume of waste that accumulates in TPS and TPA.

In addition to the lack of awareness of the residents themselves regarding the importance of household waste management and its benefits for the environment and health, the community lacks the will and ability to manage waste where they already have good knowledge about waste and its management but they have no will to apply what they know regarding waste management. They know that organic waste or food and vegetable waste can be composted and used as fertilizer but they do not have the will to compost, they know that organic and inorganic waste must be separated by sorting but they do not do it and combine the two in one container. They are able to do it but they do not have the will and do not feel responsible for implementing their good knowledge about household waste management.

4. CONCLUSION

Of the 96 research samples, the majority of families have a good level of knowledge (86.5%). And family participation in this research sample has a low average participation (79.2%). Based on the results of the Spearman rank test, the significance value = 0.833 ($\text{sig} > 0.05$) so that H_a is rejected and H_o is accepted. A very weak and negative correlation (-0.022) indicates that increased knowledge is not closely related to increased family participation in household waste management. This means that there is no significant relationship between the level of knowledge and family participation in household waste management in Baginda Village in 2024.

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