

Factors Related to Household Waste Management Behavior in Calang, Aceh Jaya Regency

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ABSTRACT

Background: Waste management deals with health issues, climate change, poverty alleviation, food and resource security, and sustainable production and consumption. **Objective:** Analyze factors related to household waste management behavior in Calang, Aceh Jaya Regency. **Method:** This type of research is quantitative research with the number of research subjects as many as 135 heads of families using the cross sectional method. Endogenous research variables of this study are household waste management behavior and exogenous variables are knowledge, awareness, infrastructure, attitudes, and information. Data collection using questionnaires and data dialysis using the SmartPLS method. **Results:** There was a significant relationship between attitudes (t-statistics = 1.984), infrastructure facilities (t-statistics = 6.807), and information (t-statistics = 2.339) with household waste management behavior. There was no significant association between knowledge (t-statistics = 0.260) and awareness (t-statistics = 0.650) and household waste management behavior. **Conclusion:** Attitudes, infrastructure and information are factors related to household waste management behavior in Calang Aceh Jaya Regency, knowledge and awareness are variables that are not related to household waste management behavior, this is possible due to lack of socialization related to household waste management to the community and the influence of local customs and culture.

INTRODUCTION

Waste is one of the main problems in facing environmental health issues. The negative impacts of waste on the environment are very diverse, including soil and water pollution, the spread of disease, and ecosystem degradation (Febrianti, 2022). Based on the Regulation of the Minister of Environment and Forestry of the Republic of Indonesia Number 14 of 2021 concerning waste management in waste banks, waste management needs to be carried out in a comprehensive circular economy by the central government, regional governments and the community, healthy for the community, safe for the environment (Ariani, Nurjannah, & Hidayanti, 2021).

Indonesia's 2022 Waste Data through the National Waste Management Information System of the Ministry of Environment and Forestry (KLHK) accessed on December 31, 2022, the amount of waste generation reached 35,347,766.03 million tons per year. Managed waste 17,443,552.67 (49%) (Jaya, Syamsari, Dullah, Lestari, & Andriani, 2023). For Aceh Province Waste Data through the National Waste Environmental Management Information System, the number of landfills reached 598,630.37 tons per year, managed waste 332,271.02 tons per year, In Aceh Jaya Regency 17,231.29 tons per year, handling 11,439.10 (66%).

According to UNEP (2005) Waste management is related to health issues, climate change, poverty alleviation, food and resource security, and sustainable production and consumption. (Indriatmoko & Purwanta, 2017). However, waste management can also be considered as a system bottleneck. Some factors that influence this include population distribution and density, socioeconomic characteristics and physical environment, as well as attitudes, behaviors, and culture in society (Aminah & Muliawati, 2021).

Based on data from the Health Profile of the Aceh Jaya District Health Office in 2022, the morbidity rate in diarrhea cases was found to be 27.84% (2607) in children under five while at all ages it was found to be 27.53% (2636) per 1000 population, the discovery of pneumonia cases in toddlers 394 out of the number of toddlers 8,832, and the number of suspected cases of childhood tuberculosis 130 patients (47.69%) per 100,000 population. In the working area of UPTD Puskesmas Calang found the number of tuberculosis cases 2 cases from a total of 130 cases in Aceh Jaya Regency, the number of pneumonia cases 31 cases and the number of visits for toddlers coughing or difficulty breathing 41 cases from the number of toddlers 690 toddlers, the discovery of diarrhea cases in the all ages group 243 cases and 163 cases in the toddler group from a population of 9,013, The estimated percentage of the number of diarrhea cases is all cases in the UPTD Puskesmas work area, including cases found in hospitals.

These behaviors include knowledge, attitudes, and actions. Knowledge of environmental cleanliness includes knowledge about clean and healthy living behavior (PHBS) and regional regulations (Perda). Behavior is the second largest factor after environmental factors that affect the health of individuals, populations, and communities. Special Order in adults, the formation of new behaviors begins in the cognitive realm (Aminah & Muliawati, 2021).

Community participation in waste management is the active and voluntary participation of local communities in the entire waste management process. Healthy behavior means maintaining and improving health and protection from the threat of disease, while a healthy environment means a pollution-free environment, healthy housing, and healthy waste management.

A beautiful, clean and healthy environment is a hope for everyone, but to realize it all requires awareness and commitment in protecting the environment. Therefore, increasing public awareness related to waste processing is considered very important to maintain environmental health. Based on the description above, the author is interested in conducting research with the title: "Factors Related to Household Waste Management Behavior in Calang, Aceh Jaya Regency".

LITERATURE REVIEW

Waste Management

Waste management is a systematic, comprehensive, and sustainable activity that includes waste reduction and processing (Law No. 18 of 2008). Waste management is an activity where waste management handles waste from generation to final disposal, including collection, transportation, final processing and storage, as well as supervision and management regulations (Mustaghfiroh, 2020).

Based on Law Number 18 of 2008, waste management consists of household waste, similar types of household waste, and special waste. Waste, if processed properly has a number of negative impacts. Therefore, sustainable waste management is very necessary to achieve various goals. especially sustainable development (Ambina, 2019).

Community behavior that is lacking in carrying out activities related to household management, some people dispose of waste by picking it up and leaving it alone, so that it can have an impact on the living environment and the surrounding environment. As a result of poor community behavior in waste management, it can cause various environmental problems (Tjolli & Warami, 2020).

Research Hypothesis

1. Ha : There is a relationship between knowledge and household waste management behavior in Calang, Aceh Jaya Regency.
2. Ha : There is a relationship between awareness and household waste management behavior in Calang, Aceh Jaya Regency.
3. Ha : There is a relationship between infrastructure facilities and household waste management behavior in Calang, Aceh Jaya Regency.
4. Ha : There is a relationship between attitude and household waste management behavior.
5. Ha : There is a relationship between information and household waste management behavior in Calang, Aceh Jaya Regency
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relationship between information and household waste management behavior in Calang, Aceh Jaya Regency

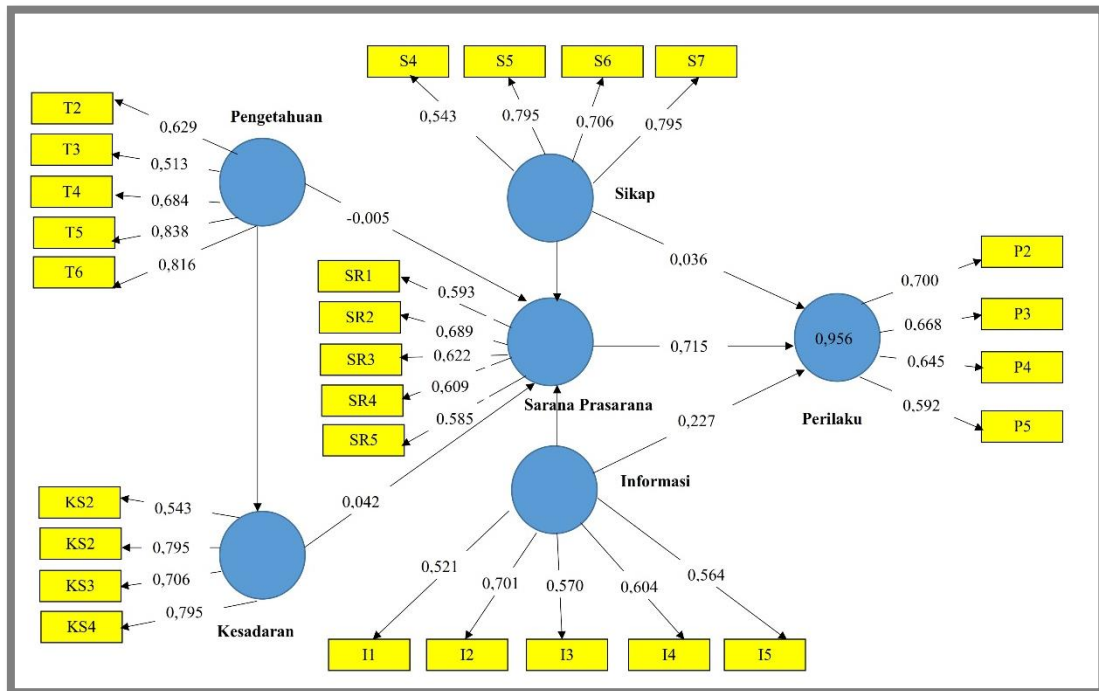
METHODOLOGY

This study was conducted observationally and is a type of quantitative research with a *cross sectional* approach.

The study population is all heads of families in the Calang area of Krueng Sabee District consisting of 6 (six) villages, namely Happy Village, Sentosa Village, Keutapang Village, Dayah Baro Village, Blang Village, Sentosa Village, Happy Village, and Pantan Makmur Village. The population of this study amounted to 2730 households. The sample of this study was calculated using the Slovin formula and obtained a sample of 135 people. Sampling is done by proportional random sampling. Data collection using Questionnaires. Data analysis using t statistics with smart PLS software.

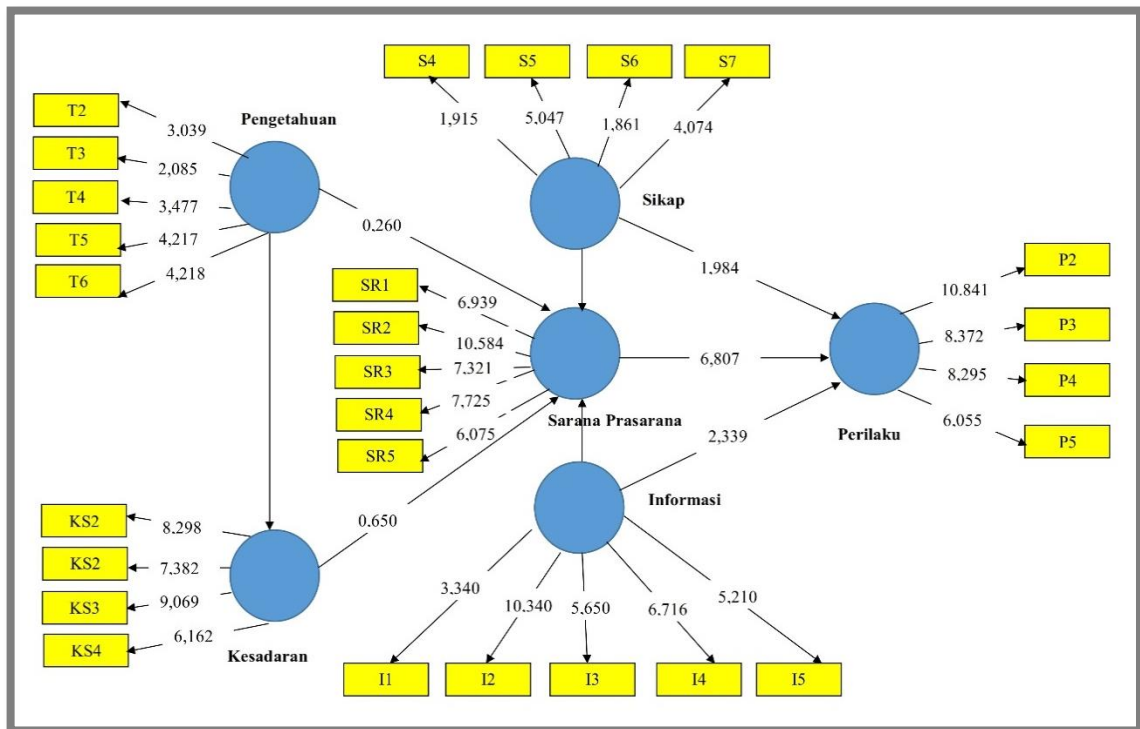
RESEARCH RESULT

The number of respondents in this study was 40 elderly posyandu cadres. The results of the univariate analysis of this study can be seen in table 1, below



Remarks : T = Knowledge; KS= Consciousness; SR= Infrastructure
S= Attitude; I=Information

The figure above shows the relationship between variables of knowledge, awareness, infrastructure, attitudes and information with household waste management behavior. Hypothesis Testing with T Test looks at the relationship between factors (knowledge, awareness, infrastructure, attitudes and information) If the t-statistic value >1.96 there is a relationship with household waste management behavior shown in the following figure:



Based on the figure above, it shows that knowledge is not related to household waste management behavior with t-statistic values of $0.260 < 1.96$; Awareness was not related to household waste management behavior with a T-Statistic value of $0.650 < 1.96$; Infrastructure facilities are related to household waste management behavior with a T-Statistic value of $6.807 > 1.96$; Attitudes are related to household waste management behavior with Statistical t-value of $1.984 > 1.96$ and information is related to household waste management behavior with Statistical t-value of $2.339 > 1.96$

DISCUSSION

The relationship between knowledge and consciousness

Knowledge and consciousness have a close relationship in human life. Knowledge is information or understanding gained through experience, learning, or disclosure. While consciousness is a state of being aware or aware of something, be it oneself, the surrounding environment, or existing reality. Knowledge helps increase awareness The more knowledge a person has, the greater their awareness of things.

Knowledge provides a broader and deeper insight into a topic or problem, thereby increasing awareness of the complexities and nuances that exist. Awareness drives the search for knowledge when a person has awareness of something, they tend to want to know more about it. Awareness creates curiosity and encourages individuals to seek new knowledge or deepen their understanding.

Knowledge and awareness reinforce each other Knowledge and awareness reinforce each other in a cycle. The more knowledge gained, the

greater the consciousness formed. Conversely, the greater the awareness, the stronger the urge to seek and acquire new knowledge. Critical awareness requires knowledge to have critical awareness, one needs sufficient knowledge. Critical awareness involves the ability to deeply analyze, evaluate, and question information or situations.

The relationship between consciousness and infrastructure

The relationship between consciousness and facilities and infrastructure may not be directly visible, but both have significant links in certain contexts. Awareness affects the use of facilities and infrastructure. The level of awareness of a person or community about the importance of certain facilities and infrastructure can affect how effectively these facilities are utilized.

Facilities and infrastructure can increase awareness of the existence of adequate facilities and infrastructure can increase public awareness about something. For example, the existence of good sports facilities can increase public awareness about the importance of a healthy lifestyle and exercise. Awareness encourages the procurement of facilities and infrastructure when people have a high awareness of certain needs, they tend to demand the existence of facilities and infrastructure that support these needs. For example, awareness of the importance of waste management can encourage the procurement of adequate waste management facilities.

It can be concluded that consciousness and facilities and infrastructure have a reciprocal relationship that influences each other. Public awareness can encourage the utilization, procurement, and maintenance of good facilities and infrastructure, while the existence of adequate facilities and infrastructure can also increase public awareness of various things. This link is important to note in an effort to improve the quality of people's lives.

The relationship between infrastructure and attitude

There is a fairly close relationship between infrastructure facilities and individual or community attitudes. Here are some of the links between infrastructure facilities and attitudes, the quality of infrastructure facilities can affect attitudes, availability and quality of good facilities and infrastructure can form a positive attitude in individuals or communities:

Attitudes affect the development of infrastructure, community attitudes also affect how priorities and efforts to develop facilities and infrastructure are carried out. If the community has a positive attitude and realizes the importance of a facility, they will support and encourage the development of the infrastructure. It can be concluded that there is a reciprocal relationship between infrastructure facilities and individual or community attitudes. Good infrastructure can form a positive attitude, while a positive attitude will also encourage better utilization, maintenance, and development of infrastructure. This relationship is important to pay attention to in an effort to improve the quality of life of the community as a whole.

The relationship between information and attitude

There is a close relationship between information and individual or community attitudes. Information can influence and shape attitudes, and vice versa, a person's attitude can also affect how he receives and perceives information. Information shapes attitudes. The information a person receives can shape their attitude towards something. Accurate, complete, and useful information tends to form a positive attitude, while inaccurate, biased, or negative information can form a negative attitude.

Attitudes affect the reception of information: The attitudes a person has can affect how they receive and perceive information. A person with a positive attitude tends to be more open and receptive to new information, while a person with a negative attitude tends to reject or doubt the information received. New information received by a person can change their attitude towards something. If the new information is strong, credible, and contradicts previous attitudes, then a person's attitude may change.

Knowledge relationship with household waste management behavior

The results showed that the knowledge variable was not related to household waste management behavior had a t-statistic value of <1.96 of 0.260 , it showed that knowledge had no positive and significant relationship with behavior so that the first hypothesis was rejected (H1).

The results of this study are in line with research conducted by Silaban, Hardati, and Hariyanto (2018) which examined the impact of knowledge on housewives' behavior on waste management, showing that the results of knowledge factors are not related to housewives' behavior towards waste management. The lack of knowledge can affect the behavior of maintaining environmental cleanliness is not good, there needs to be a role of stakeholders in each village to be able to collaborate with health agencies related to environmental health extension activities in the village.

According to Bakhtiar, Ginting, and Silitonga (2022), the results of research on community behavior towards household waste management show collaboration between stakeholders in the village and the Puskesmas in the District Area. Based on research by Andriyanto, et al (2022), it is known that knowledge is related to household waste management. This involves the role of the District Government in developing work programs in each village to be able to provide socialization related to household waste management properly.

Based on the observations of researchers, knowledge variables can be related or not related to household waste management behavior but can be influenced by local habits and culture, although knowledge is an important factor, it needs to be accompanied by other efforts such as socialization related to household waste management and the provision of adequate infrastructure.

There is a gap between knowledge and concrete action. Although people have knowledge about household waste management, this knowledge is not necessarily applied in concrete actions. Often there is a gap between what is known and what is done in everyday life. Lack of motivation and drive to behave positively. Knowledge alone may not be enough to change behavior if it

is not accompanied by strong motivation and encouragement from the surrounding environment (Amraeni & Nirwan, 2021). Public knowledge may not be sufficient due to the lack of socialization and enforcement of rules related to household waste management from the authorities. This can lead to people being less motivated to adopt good behavior.

The relationship of awareness with household waste management behavior.

Research shows that awareness can be seen from the results of the t-statistical test showing that the variable of awareness with household waste management behavior has a t-statistic value of <1.96 of 0.650 , it shows that awareness has no positive and significant relationship with behavior so that the second hypothesis is rejected (H2).

This research is related to the findings of Ical and Mane (2022), the awareness factor is closely related to household waste management behavior. Awareness is the most important aspect in preserving the environment, lack of awareness can result in environmental damage and accumulation of waste. The community has a very influential awareness of the information obtained and it is necessary to hold mutual assistance activities in the village in every minggu. Community participation in carrying out routine cleaning activities in the village every week, so that people are more aware of maintaining the cleanliness of their living environment (Khoiriyah, 2021).

Based on the observations of researchers, awareness variables can be related or not related to household waste management behavior but are influenced by local habits, attitudes and culture, although awareness is an important factor, it needs to be accompanied by other efforts such as counseling related to household waste management and adequate information.

Lack of drive and motivation to act awareness alone may not be enough to encourage a person to behave positively in household waste management. It takes strong encouragement and motivation, both from within oneself and from the surrounding environment, to turn consciousness into concrete action.

The relationship of infrastructure facilities with household waste management behavior.

The results showed that the variable of infrastructure facilities can be seen from the results of the t-statistical test showing that the variable of infrastructure facilities on household waste management behavior has a t-statistical value of >1.96 of 6.807 , it shows that infrastructure facilities have a positive and significant relationship with behavior so that the third hypothesis is accepted (H3).

According to Bakhtiar et al. (2022), examining community behavior towards household waste management shows that the variables of facilities and infrastructure are related to community behavior in household waste management. Every house has the availability of waste facilities, making it easier to manage household welfare.

Based on research by Astina, Fauzan, and Rahman (2020)) examining factors related to household waste management behavior, it shows that the variables of Infrastructure Facilities are significantly related to household waste

management. Stakeholders at the village level participate in preparing waste facilities for each household.

From the observations of researchers, waste management infrastructure is an important part in supporting the realization of good household waste management. Regarding infrastructure, there is a role for the district government through village tools in providing waste management infrastructure in accordance with its function to improve the quality of life of the community in the environment.

The relationship of attitude with household waste management behavior.

The results showed that the attitude variable can be seen from the results of the T-statistical test showing that the attitude variable towards household waste management behavior has a t-statistic value of >1.96 of 1.984, it shows that infrastructure facilities have a positive and significant relationship with behavior so that the fourth hypothesis is accepted (H4).

The results of this study are in line with research conducted by Astina et al. (2020) and Poety and Wiyono (2017) examining the influence of attitudes on housewives' behavior towards waste management, from the results of the study showed attitude variables related to housewives' behavior towards waste management. Household waste management behavior is very important in maintaining environmental sustainability and cleanliness, the community has a positive attitude in managing household waste.

From the observations of researchers, attitudes are actions (closed reactions) or activities or concerns for the environment that are closely related to behavior (actions) or closed reactions in household waste management. A positive attitude in managing household waste well makes the house comfortable and clean. Attitude describes the tendency to act, the tendency to respond to an object or situation in a certain way, both positive and negative. A positive attitude towards household waste management can encourage people to behave in accordance with this attitude, namely doing good waste management.

In this case, attitudes affect intentions and motivations, positive attitudes towards household waste management can affect the intention and motivation of the community to engage in these activities. The more positive a person's attitude, the greater his intention and motivation to behave in accordance with that attitude (Rangkuti, Musfirah, & Febriyani, 2020). Attitudes also reflect values and beliefs, attitudes are formed from the values and beliefs held by a person. If people have positive values and beliefs in the importance of household waste management, then their attitudes tend to support good behavior in this regard. Attitudes are influenced by environmental and social factors around society.

The relationship of information with household waste management behavior.

Research shows that information factors can be seen from the results of the T-statistical test showing that the information variable on household waste

management behavior has a t-statistical value of >1.96 of 2,339, it shows that infrastructure facilities have a positive and significant relationship with behavior so that the fifth hypothesis is accepted (H5).

Previous research found that there is a relationship between exposure to information on waste sorting and the intensity of peer group interaction with household waste sorting behavior (Hamidah, 2023).

The results of Poety and Wiyono's (2017) research examined factors related to household waste management behavior, from the results of the study showed information variables related to household waste management behavior. Information is very important in increasing our knowledge and awareness in carrying out good household waste management.

From the observations of researchers, waste management information is an important part in supporting the realization of good waste management. Information is a meaningful part of the recipient and useful in decision making. In this case, it can be known that information is a means of liaison for us to know about household waste management, the more information we get, the greater the level of knowledge we have regarding household waste management.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of research that has been conducted, it can be concluded that the availability of infrastructure facilities in households, attitudes and information has a t-statistical value of > 1.96 so that these variables are positively and significantly related to household waste management behavior in the community in Calang, Aceh Jaya Regency. It is recommended to the Puskesmas in Aceh Jaya Regency to provide socialization to the community about household waste management and environmental hygiene, this aims to change the mindset of the community in maintaining health and also in managing waste originating from households.

ADVANCED RESEARCH

Research only analyzes internal factors (in humans) that influence behavior, not yet examines external factors such as Government Regulations.

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