# The Impact of Education on Knowledge of Household Waste Management in Semerap Village, Kerinci Regency

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#### **Abstract**

Waste management aims to improve public health and environmental quality and can convert waste into resources. Waste management is said to be good if the waste does not become a medium for the breeding of disease germs and does not become an intermediary for the spread of disease. The housewife is a central and very important figure in running life in the family. The women's empowerment program is directed at improving the quality of life of women and the active participation of women in society in preventing and controlling the impact of pollution as well as good and correct environmental management, especially in terms of waste management. This type of research includes a quasi-experiment using a one group pre-test and post-test design and the respondents in this research are housewives. The average knowledge analysis before being given education was 8.74% with a standard deviation of 1.450%. In terms of knowledge, the average obtained is 9.68% with a standard deviation of 2.143%. It can be seen that the mean value of the difference in knowledge before and after being given education is 0.943 with a standard deviation of 1.324. The statistical test results obtained a p-value of 0.000 so it can be concluded that there is a significant influence between knowledge before and after providing maternal education about waste management.

## Keywords

Education; knowledge; household waste; management



# I. Introduction

The source of waste produced in Indonesia is 48% household waste, 24% from traditional markets, 9% commercial areas, 4% schools, 6% offices, 7.5% roads, and 1.5% others (National Data KLH, 2018). The components of waste in Indonesia are 60% organic waste, 15% plastic, 10% paper, 4.5% metal, 5.5% rubber, 3.5% cloth, 1.7% glass, and others 2, 4% (KLH National Data, 2018). Waste management: 66.69% of waste landfilled in landfills, 19.62% of unmanaged waste, 7.02% of processed waste for composting, 2.39% of processed waste in waste banks, 2.17% of processed waste for fuel, 2.17% of processed waste for fuel raw material recycling 0.79%, creative production recycling processed waste 0.56%, biogas processed waste 0.19%, and other processed waste 0.88% in the percentage of waste processing, there is still a lot of waste that is landfilled without further management again (KLH Data, 2020). Human Resources (HR) is the most important component in a company or organization to run the business it does. Organization must have a goal to be achieved by the organizational members (Niati et al., 2021). Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired (Shah et al, 2020). The development of human resources is a process of changing the human resources who belong to an organization, from one situation to another, which is better to

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prepare a future responsibility in achieving organizational goals (Werdhiastutie et al, 2020).

Policies for handling waste are regulated in Law no. 18 of 2008 concerning Waste Management and PERPRES no. 97 of 2017 concerning National Policy and Strategy for Management of Household Waste and Similar Types of Household Waste. In Law no. 18 of 2008 concerning Waste Management has explained that waste has become a national problem so far that handling needs to be carried out in a comprehensive and integrated manner from upstream to downstream in order to provide economic, health benefits, a sense of security for the environment, and can change people's behavior.

Waste management aims to improve public health and environmental quality and turn waste into a resource. From an environmental health perspective, waste management is considered good if the waste does not become a medium for breeding disease and the waste does not become a medium for the spread of disease. Development is a systematic and continuous effort made to realize something that is aspired. Development is a change towards improvement. Changes towards improvement require the mobilization of all human resources and reason to realize what is aspired. In addition, development is also very dependent on the availability of natural resource wealth. The availability of natural resources is one of the keys to economic growth in an area. (Shah, M. et al. 2020)

The housewife is a central figure and is very important for carrying out life in the family. Most of the work that mothers do at home includes taking care of the availability of drinks, food, bath water, washing, and so on. The women's empowerment program is directed at improving the quality of life, especially for women, through their active participation in society in terms of preventing or controlling the impact of pollution and good and correct environmental management through social culture by highlighting local wisdom.

The background description explains that the level of knowledge of housewives in waste management in Semerap Village, Kerinci Regency is still low, namely that there is still a lack of socialization and counseling about the impact of waste or how to manage it without an impact on the surrounding environment, where rubbish is still visible along the roads and piles of rubbish everywhere. road intersections and scattered rubbish due to the housewife's assumption that this rubbish has no impact on the environment, where we know that each individual can produce 0.7 kg of rubbish/per day with a population of 4,500 people so that the amount of rubbish produced per day is 3,150 kg/day, so if we don't reduce or manage this waste, it will become a problem for the community's life structure which can have an impact on river shallowing and disrupt the habitat of river biota, and many other impacts.

This research is directed at how concerned the community, especially housewives, is regarding household waste management, seen from several basic aspects regarding the characteristics of housewives who are used as research respondents, knowledge and experience regarding household waste management, the role of government, community leaders, facilities and infrastructure available for household waste management activities.

#### II. Research Methods

This research is a type of quasi-experimental research using a one group pre test and post test design. According to Suryabrata (2010), the results of quasi-experimental research are estimates that are close to the results of actual experimental research (true experiment) with a Pretest Posttest one Group Design research design. The population in

this study were all housewives in Semerap village, Kerinci Regency, totaling 645 families using a simple purposive sampling technique with a sample size of 87 respondents, namely housewives. Bivariate analysis with T-Dependent T-Test aims to see the impact of education on knowledge of household waste management in Semerap Village, Kerinci Regency in 2023.

## III. Results and Discussion

Research results using bivariate analysis T-Dependent T-Test was carried out to determine the mean impact of the dependent variable studied, so for more details can be seen in the table below regarding the impact before and after education on mothers' knowledge about household waste management. Education is a very important human need because education has a duty to prepare Human Resources (HR) for the development of the nation and state (Pradana et al, 2020). According to Astuti et al (2019) Education is an obligation of every human being that must be pursued to hold responsibilities and try to produce progress in knowledge and experience for the lives of every individual. Education is one of the efforts to improve the ability of human intelligence, thus he is able to improve the quality of his life (Saleh and Mujahiddin, 2020). Education is expected to be able to answer all the challenges of the times and be able to foster national generations, so that people become reliable and of high quality, with strong characteristics, clear identities and able to deal with current and future problems (Azhar, 2018). Education and skills are the main keys in gaining social status in community life (Lubis et al, 2019).

**Table 1.** The Effect of Before and After Education on Mothers' Knowledge about Household Waste Management in Semerap Village, Kerinci Regency in 2022

Knowledge	Mean	elementary school	S.E	p-Value	N
Before	8.74	1,450	0.158	0,000	87
After	9.68	2,143	0.230		

Based on table 1 above, it can be seen that the results of the analysis of the average knowledge before education are 8.74% with a standard deviation of 1.450%. Meanwhile, the knowledge variable after education obtained an average of 9.68% with a standard deviation of 2.143%. It can be seen that the mean value of the difference between knowledge before and after education is 0.943 with a standard deviation of 1.324. The results of statistical tests obtained a p-value of 0.000, so it can be concluded that there is a significant impact between knowledge before and after education for mothers about waste management.

According to the researcher's assumption, people's knowledge, especially mothers, about household waste management is influenced by how much information they get about the ways and benefits of managing waste. Most housewives lack information in the form of socialization and education about good, correct and environmentally friendly waste management, so their knowledge about the methods and benefits of managing waste is also poor.

Respondents' poor knowledge can also be caused by the community, especially housewives, not understanding how to manage household waste correctly and meeting the requirements so that they have the ability to do it regularly. The ability of the community to carry out cleanliness and manage household waste regularly with sufficient knowledge if

they have received information about cleanliness through education, including in the form of counseling by health workers or print or electronic media.

Knowledge or cognitive is a very important domain for the formation of a person's practice or action. One of the elements needed to be able to do something is knowledge and if we want something to be done continuously then we need positive knowledge about what must be done, in other words behavior or actions based on knowledge will be more lasting than practice or actions that are based on knowledge, without being based on knowledge and a person's level of knowledge influences individual practice, the higher a person's knowledge, the higher the awareness to participate (Notoatmodjo, 2014).

Good knowledge is of course willing to take action, for example housewives in Semerap village, Kerinci Regency, where there are several housewives who know the benefits and objectives of waste management, so they carry out household waste management, on the other hand, there are several housewives who have less knowledge. well, so they don't know the benefits and objectives of managing household waste so they don't want to take action in managing household waste.

According to Notoatmodjo (2003), factors that influence a person's level of knowledge consist of internal factors, namely age, education, work and external factors, namely the environment and socio-culture. The health education process uses methods and media as tools to convey messages and health information. Its function is to instill new knowledge, opinions, concepts and habits.

Increasing knowledge can be done through formal or informal education, among the community, increasing education can be done informally through outreach to the community, counseling, distribution of health promotion media in the form of posters and leaflets. Community empowerment efforts start from increasing community understanding by providing education about waste management (Ririn, 2019).

This research is in line with research conducted by Pradita (2013), regarding the influence of dental and oral health education using power point media on the level of health knowledge. However, this research is not in line with research conducted by Latifa (2015), regarding the influence of health education on the level of knowledge of schoolaged children in Sumber Jambe Village regarding Waste Bank management, that there is no influence on a person's average knowledge between before and after education. health. The differences in research results could be due to the material presenters being people who the target does not know well or it could also be due to the different average age of the target.

This research is in line with research by Dewi (2015), it was found that education carried out using the demonstration method influenced increasing knowledge and action in managing waste in Klaten Regency with a p-value of 0.037. This is in line with research by Kamal (2017), stating that there is a relationship between the level of knowledge of housewives and household waste disposal behavior.

Good knowledge and bad behavior in processing waste is caused by a lack of information regarding good waste processing methods. Information is a factor that can influence a person's knowledge. The more information someone obtains about good household waste management, the better their knowledge will be and they will have knowledge, especially about good household waste management (Hasniatisari, 2017).

### IV. Conclusion

The results of research conducted regarding the Impact of Before and After Education on Housewives' Waste Management Knowledge in Semerap Village, Kerinci Regency, showed that there was a significant influence between knowledge before and after education of mothers regarding waste management with a p-value of 0.000. Thus, it is necessary to carry out intensive education about household waste management, especially for housewives, especially in Semerap Village, Kerinci Regency so that knowledge about waste management becomes good and it is hoped that the supporting parties will continue to improve educational activities, assistance and provide assistance with appropriate waste disposal facilities. integration from the local government so that public knowledge becomes better regarding household waste management.

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