

# RELATIONSHIP BETWEEN KNOWLEDGE LEVELS CONCERNING WASTE MANAGEMENT WITH WASTE MANAGEMENT BEHAVIOR AMONG TRADERS AT DARMARAJA MARKET YEAR 2023

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## ABSTRACT

Based on data from the national waste management information system in 2022, waste generation in Indonesia is 18.30 million tons per year, which is dominated by household waste with a figure reaching 37.6%. Therefore, currently domestic waste, especially food waste, is a major problem in Indonesia. The aim of this research is to determine the relationship between knowledge about waste management and waste management behavior among traders at Darmaraja Market. This research method uses a quantitative type with a cross sectional approach. The sampling technique was carried out using a simple random sampling technique . The sample in this research was 66 traders at Darmaraja Market. The results of this research indicate that there is a relationship between knowledge and waste management among traders at Darmaraja Market ( $p$  - value = 0.002). There is no relationship between education and waste management for traders at Darmaraja Market, there is a relationship between knowledge and waste management for traders at Darmaraja Market, and there is a relationship between facilities/facilities and infrastructure and waste management for traders at Darmaraja Market. The author suggests that market management should make regulations regarding market cleanliness so that traders do not litter and give sanctions to traders if they violate them.



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## 1. INTRODUCTION

Knowledge is the result of the process of finding out, from not knowing to knowing, from not being able to becoming able. Knowledge begins with the curiosity that exists within humans (Swarjana, 2022). Knowledge greatly influences a person's behavior. Basically, knowledge needs to be increased, not just understood but applied, analyzed and synthesized material or knowledge regarding proper and correct waste disposal (Patras et. al, 2018).

According to the World Health Organization (WHO) waste is something that is not used, is not worn, is not liked or is something that is thrown away that comes from human activities and does not occur by itself. Every day human activities, whether we realize it or not, will always produce waste. The more people and activities carried out, the more waste is generated. Waste is closely related to public health, because from this waste various disease-causing bacteria (pathogenic bacteria) live, as well as animals or insects that spread disease (vectors) (Notoatmodjo, 2011).

The problem of waste is a problem that cities in Indonesia have not yet resolved. The increasing volume of waste generation has a tendency to be related to population growth (Nurmayadi et al . , 2020). Another

waste problem lies in poor waste management. Waste management is a systematic and sustainable activity that includes reducing and handling waste. Waste management has so far used a system of collection, transportation and final disposal so that it has not been effective and efficient in solving the problem of increasing volumes of waste.

Garbage in markets is quite a big problem, because most of the market waste, especially traditional markets, consists of wet waste, so that during collection, these piles become nests for flies, rats and insects, becoming a source of soil, water and air pollution, from an aesthetic perspective. This will cause an unpleasant smell and sight. Waste in the market is sometimes still not managed well. Mountainous piles of rubbish can still be seen in the market that have not been removed by cleaning crews. This happened at a time when community activity was busy.

Data on waste generation in Sumedang Regency is 161,592.02 tons per year. On the other hand, the reduction in waste from existing generation is only 8,428.37 tons per year or the equivalent of 5.22%, with a waste handling percentage of 48,362.50 tons per year or the equivalent of 29.93%. The waste management flow includes: sorting waste according to type, quantity and nature; waste collection to temporary shelters (TPS); transporting waste from temporary storage sites (TPS) to final waste processing sites (TPAS) (DLHK, 2022).

The main problems are low waste management capacity, lack of public awareness of waste management, waste management regulations that are not yet optimal, and still little involvement of industry responsibility. Therefore, it is very necessary to make various efforts involving the community, so that the impact on better waste management is faster and wider.

Darmaraja Market in Sumedang Regency is one of the markets that contributes as a waste collector. In this market there are rubbish bins, but you can still see piles of rubbish on the road, which is not a good sight for passing motorists or buyers who are shopping. A preliminary study was conducted on March 23 2023 at Darmaraja Market with a sample of 10 traders. The results of interviews with 10 traders found that 6 people (60%) did not respond well, according to them it was okay to throw rubbish carelessly and leave the rubbish scattered around. everywhere, because later there will be officers to clean it. Apart from that, they also stated that they did not know about the management and facilities for waste disposal due to the problem of inadequate availability of waste bins. Meanwhile, 4 other traders (40%) responded well, namely they cleaned up the rubbish and warned other traders not to throw rubbish carelessly . Based on the description of the background to the problem above, the author is interested in conducting research with the title " The relationship between knowledge about waste management and waste management behavior among traders at Darmaraja Market in 2023 ".

## 2. METHOD

The research method used is quantitative research with a cross sectional approach. The population in this study were traders at Darmaraja Market, totaling 197 people. The sampling used in this research was simple random sampling , with a total sample of 66 traders. The instrument used was a questionnaire. Data analysis includes univariate and bivariate analysis using the Spearman Rank test .

## 3. RESULTS AND DISCUSSION

### 3.1. Results

#### A. Univariate Analysis

##### 1) Knowledge Overview

**Table 1 . Frequency Distribution of Traders' Knowledge at Darmaraja Market in 2023**

Knowledge	Frequency	Percentage (%)
Good	32	48.5
Not good	34	51.5
<b>Total</b>	<b>66</b>	<b>100</b>

Table 1 shows that the knowledge of traders at Darmaraja Market in 2023 shows that of the 66 traders, most of their knowledge in the bad category has the highest frequency, namely 34 traders (51.5%).

##### 2) Market Waste Management Behavior

**Table 2 Frequency Distribution of Waste Management Behavior at Darmaraja Market in 2023**

Market Waste Management	Frequency	Percentage (%)
Good	44	66.6
Not good	22	33.3
<b>Total</b>	<b>66</b>	<b>100</b>

Table 2 shows that waste management at Darmaraja Market in 2023 shows that of the 66 traders, the majority of traders think that market waste management in the good category has the highest frequency, namely 44 traders (66.6%).

## B. Bivariate Analysis

- 1) The Relationship between Knowledge and Waste Management among Traders at Darmaraja Market in 2023.

**Table 3 . The Relationship between Knowledge and Waste Management among Traders at Darmaraja Market in 2023**

Knowledge	Waste management						P Value*
	Good		Not good		Total		
	F	%	F	%	F	%	
Good	29	43.94	5	7.57	34	48.48	0.002
Not good	16	24.24	16	24.24	32	51.52	
<b>Total</b>	<b>45</b>	<b>68.18</b>	<b>21</b>	<b>31.82</b>	<b>66</b>	<b>100</b>	

Based on table 6 above, it can be seen that the small number of traders whose waste management is not good, amounting to 7.57%, have good knowledge, while those whose knowledge is not good is 24.24%. The results of the test analysis of the relationship between knowledge and waste management among traders at Darmaraja Market in 2023 using Chi-square analysis, obtained a significance value of p value = 0.002 ( $p < 0.05$ ). This shows that  $H_0$  is rejected and  $H_a$  is accepted, meaning that there is a relationship between knowledge and waste management among Darmaraja Market traders in 2023.

## 3.2. Discussion

### A. Knowledge Overview

The picture shown in this research is that most of the knowledge in the bad category has the highest frequency, namely 34 traders (51.5%) and for the good category, the frequency is 32 traders (48.5%). This is because even though traders' knowledge of waste management in the market is quite good, other factors such as limited facilities and cultural barriers may be the cause of the lack of implementation of effective waste management.

According to Notoatmodjo (2011), knowledge is the result of knowing and occurs after someone senses a particular object. Knowledge will give rise to awareness and will ultimately cause people to behave in accordance with the knowledge they have, and the addition of knowledge cannot only be done in a short time, but must be continuous and sustainable. It also provides new information so that knowledge continues to increase and deepen (Notoatmodjo, 2011). Meanwhile, the results of research conducted by Wardhani (2022) show that the majority of knowledge is in the high level of knowledge category, as many as 109 traders (94.8%), and in the low level of knowledge category, there are 6 traders (5.2%).

### B. Overview of Waste Management

The picture shown in this research is that the majority think that market waste management in the good category has the highest frequency, namely 44 traders (66.6%) and for the bad category, the frequency is 22 traders (33.3%). This is due to a lack of awareness and understanding of traders about the importance of good waste management.

According to Notoatmodjo (2007), waste management includes collection, transportation, and destruction or management of waste in such a way that waste does not become a disturbance to public health and the environment (Notoatmodjo, 2007).

Meanwhile, the results of research conducted by Wardhani (2022), show that the majority of waste management is in the good category, namely 106 traders (92.2%), and in the bad category, there are 9 traders (7.8%).

### C. The Relationship between Knowledge and Waste Management among Traders at Darmaraja Market in 2023.

Based on the results of the analysis using the Chi-square analysis test with the degree of confidence used is 95% and  $\alpha = 0.05$  is obtained p value = 0.002 and 0.002 where  $< 0.05$ . This shows that  $H_0$  is rejected and  $H_a$  is accepted. This means that there is a relationship between knowledge and waste management among traders at Darmaraja Market in 2023.

's theory (1980), behavior is influenced by several factors, one of which is predisposing factors such as values, knowledge and attitudes which relate to a person's motivation to act. Behavior that is based on

knowledge will last longer than that which is not. It is hoped that a high level of knowledge will lead to positive behavior or the better the knowledge, the better the behavior, in this case is waste management behavior. Carrying out outreach and providing an interpretation regarding waste management is something that can be started to empower the community to manage waste (Green, 1980).

The research results show that market traders' knowledge is good, however, judging from the behavior of market traders, they still lack attention to market waste management, such as in terms of providing rubbish bins and separating waste. As many as 7.51 % of traders have poor waste management but their knowledge is good, traders already know about how to manage waste from container to final processing, but due to the lack of waste management in the market and low awareness of traders regarding the provision of waste bins, traders keep throwing rubbish anywhere.

In this research, 24.24 % of traders' knowledge regarding waste management stated that they did not understand or understand waste management, especially at the separation stage. All the waste produced by traders is put together in a corner of the room without any waste being separated between organic and inorganic. Because according to them, organic and inorganic waste are the same. This will result in the breeding of disease-carrying vectors and will reduce the economic value of used goods that can be reprocessed such as cardboard, used bottles and plastic.

The results of this research are in line with the research results of Rahmadani (2017) with a p value = 0.001 which states that there is a significant relationship between knowledge and waste management at Pasar Raya Solok. This also shows that traders have low knowledge because the socialization and education process carried out by the government regarding the ongoing waste management program is still not optimal.

In contrast to the research results of Rahmadani (2017), the results of this research are inversely proportional to research conducted by Ahmad, A. (2022) with a p value = 0.696 which states that there is no significant relationship between knowledge and waste management in Jaro District, Regency. Tabalong. Thus, knowledge needs to be increased further so that waste disposal and management is in accordance with what is expected, namely meeting health requirements, increasing education and information related to waste management.

#### 4. CONCLUSION

Based on the results of the research, the following conclusions can be drawn :

1. Most of the traders' knowledge at Darmaraja Market is having the highest percentage is the bad category with a percentage of 51.5 %.
2. Most of the waste management at Darmaraja Market is having the highest percentage is the good category with a percentage of 66.6 %.
3. There is a relationship between knowledge and waste management among traders at Darmaraja Market with p value = 0.002 (p value < 0.05) .

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