Original Article

Knowledge, Attitudes, Age, Education Level Factors to Waste Management

Qurrota A'yunin[1], Dwi Noerjoedianto[1], Oka Lesmana[1]

[1]Department of Public Health, Faculty of Medicine and Health Sciences, Jambi University, Jambi, Indonesia

ARTICLE INFO

Article History:
Submit : Apr 10, 2022
Revised : May 20, 2022
Accepted : May 24, 2022
Online : June 30, 2022

Keywords:
Knowledge,
Attitude,
Age,
Education Level,
Waste management.

ABSTRACT

Background: waste is one of the environmental problems which can never be solved. Indonesia is one of the countries that have problems with waste. This study aimed to determine the relationship between knowledge, attitudes, age, education level, and waste disposal facilities on waste management.
Methods: This study used an analytical survey method with a cross-sectional approach. The population in this study were 398 respondents with a sample of 90 respondents with a sample of 90 respondents with a sampling technique using accidental random sampling. The independent variables in this study were knowledge, attitudes, age, education level, and waste disposal facilities, while the dependent variable was waste management. The measuring tools used are observation sheets and questionnaires. Data analysis was carried out univariate and bivariate (using the chi-square test = 0.05).
Results: The results of this study are that there is a relationship between knowledge and waste management (pvalue = 0.015 <0.05), there is a relationship between attitudes and waste management (pvalue =0.023 <0.05), there is no relationship between age and waste management (pvalue =0.928 > 0.05), there is no relationship between education level and waste management (pvalue =0.079 > 0.05), there is a relationship between waste disposal facilities with waste management (pvalue =0.001 > 0.05)`
Conclusion: From the results of this study the behavior of traders and waste disposal facilities is very influential on waste management. It is recommended for the manager of the market officer to give direction to the traders to do good waste management, as well as improve the waste disposal facilities in the market.

Corresponding Autor : Dwi Noerjoedianto
Affiliation : Department of Public Health, Faculty of Medicine and Health Sciences, Jambi University, Jambi, Indonesia
Email : dwi_noerjoedianto@unja.ac.id
Cite this as : A'yunin, Q., Noerjoedianto, D., & Lesmana, O. (2022). Knowledge, Attitudes, Age, Education Level Factors to Waste Management. Journal of Applied Nursing and Health, 4(1), 9–15. https://doi.org/10.55018/janh.v4i1.27

Introduction

Globally, waste is an unsolved environmental problem—one of the countries that still have experience in waste problems is Indonesia. Indonesia is one of the countries included in the top 10 countries with the most population globally, and this will undoubtedly cause other problems, namely the waste problem (Oktarizal, H., 2021). According to data from the Central Statistics Agency, Indonesia's population in 2020 reached 270 million and is expected to increase every year (BPS., 2020). Waste generation in 2020 reached 33.2 million tons/year, with managed waste amounting to 19.7 million tons/year and unmanaged waste amounting to 13.5 million tons/year (SIPSN., 2020). The unfinished waste problem is caused by several factors, including the lack of knowledge and public participation in waste management. In addition, the government's role still lacks in providing facilities and infrastructure for waste disposal (Setiawan., 2017). Garbage can often be found in public places, one of which is the market. The market is a place for transactions or buying and selling between sellers and buyers (Astuti., 2019). Every day the market produces quite a lot of waste from traders in the form of leftover merchandise that has rotted or is not sold for sale anymore. Therefore, markets often have a terrible stigma in terms of environmental management, especially traditional markets (Wasilah., 2017).

Jambi Province is one of the provinces that contribute to waste in Indonesia. The highest waste generation in Jambi Province comes from Jambi City. Based on data from the Jambi City Environment Agency, in 2021, the waste generation in Jambi is 156.1 tons 2021 (January-June) it will increase again by 158.1 tons. The cause of a large amount of waste generation in Jambi City comes from traditional markets, which produce the most waste after household waste, with 18.70 tons (2021). One of the traditional markets contributing waste generation in Jambi City is Pasar Aur Duri, which produces around 3-4 tons of waste per day (Dinas Lingkungan Hidup. 2020). If waste management can not be carried out properly, it will harm the people living around the thorn market. In addition, waste management that is not handled correctly can cause pollution to the environment.

Another problem that there are puddles of water in some ditches which can become breeding grounds for mosquitoes that can cause dengue fever in traders or communities around the market. Another problem is that there are puddles of water in some ditches, which can become breeding grounds for mosquitoes that can cause dengue fever in traders or communities around the market. The problems that occur in the traditional market of Aur Duri Thorn are caused by the lack of knowledge of market traders, the attitude of traders, and the lack of waste disposal facilities available in the traditional market of Aur Duri.

Method

This study used an analytic survey method with a *cross-sectional* approach. The sampling technique used was accidental random sampling. The population is 398 respondents with a total sample of 90 people, according to the inclusion criteria. This research was conducted in March 2022, and the data were analyzed using the chi-square test. The analysis uses statistical tests, and this research has gone through ethical tests. The independent variables in this study were knowledge, attitudes, age, education level, and waste disposal facilities, while the dependent variable was waste management. The measuring tools used are observation sheets and questionnaires. Data analysis was carried out univariate and bivariate (using the chi-square test = 0.05). This research has been through a research ethic test.

Results

The data presented include the characteristics of gender, age, education level, knowledge, attitudes, waste disposal facilities, and waste management.

Table 1. Univariate Analysis

No	Characteristics of Respondent	f	%
	Gender		
1	Man	13	14,4
	Woman	77	85,6
	Total	90	100
	Age		
2	< 35 years	28	31,1
	> 35 years	62	68,9
	Total	90	100
	Education Level		
3	Low (No School, SD, SMP)	35	38,9
	High (SMA, PT)	55	61,1
	Total	90	100
	Knowledges		
4	Bad	43	47,8
	Good	47	52,2
	Total	90	100
	Attitudes		
5	Bad	34	37,8
	Good	56	62,2
	Total	90	100
	Waste Disposal Facilities		
6	Bad	72	80
	Good	18	20
	Total	90	100
	Waste Management		
7	Bad	76	84,4
	Good	14	15,6
	Total	90	100

Table 2. Cross Tabulation of Knowledge with Waste Mmanagement at Aur Duri Traditional Market, Jambi City.

Knowledge	Waste Management					
	Bad		Good		Total	
	n	%	n	%	n	%
Bad	41	95,3	2	4,7	43	100
Good	35	74,5	12	25,5	47	100
Total	76	84,4	14	15,6	90	100
P-Value	0,015					
PR (95%CI)	1,280 (1,070-1,533)					

Tabel 3. Cross Tabulation of Attitudes with Waste Management at Aur Duri Traditional Market, Jambi City.

Attitudes	Waste Management					
	Bad		Good		Total	
	n	%	n	%	n	%
Bad	33	97	1	2,9	34	100
Good	43	77	13	23	56	100
Total	76	84	14	16	90	100
P-Value	0,023					
PR (95%CI)	1,264 (1,082-1,477)					

Tabel 4. Cross Tabulation of Age with Waste Management at Aur Duri Traditional Market, Jambi City.

Age	Waste Management					
	Bad		Good		Total	
	n	%	n	%	n	%
< 35 years	23	82,1	5	17,9	28	100
> 35 years	53	85,5	9	14,5	62	100
Total	76	84,4	14	15,6	90	100
P-Value	0,928					
PR (95%CI)	0,961 (0,786-1,175					

Tabel 5. Cross Tabulation of Education Level with Waste Management at Aur Duri Traditional Market, Jambi City.

Education Level	Waste Management					
	Bad		Good		Total	
	n	%	n	%	n	%
Low	33	94,3	2	5,7	35	100
High	43	78,2	12	21,8	55	100
Total	76	84,4	14	15,6	90	100
P-Value	0,079					
PR (95%CI)	1,206 (1,026-1,418)					

Tabel 6. Cross Tabulation of Waste Disposal Facilities with Waste Management at Aur Duri Traditional Market, Jambi City.

Waste Disposal Facilities	Waste Management					
	Bad		Good		Total	
	n	%	n	%	n	%
Bad	66	91,7	6	8,3	72	100
Good	10	55,6	8	44,4	30	100
Total	76	84,4	14	15,6	90	100
P-Value	0,001					
PR (95%CI)	1,650 (1,085-2,509)					

The results showed that almost all (85.6%) respondents were female, and (68.9%) respondents aged >35 years. Almost all (61.1%) of respondents have a high level of education (SMA, PT). A total of (52.2%) of respondents have good knowledge, and as many as (62.2%) of respondents have a good attitude. Almost all (80.0%) respondents have poor waste disposal facilities. Almost all (84.4%) respondents have poor waste management. The results show that almost all respondents (95.3%) have poor knowledge of waste management, with a P-Value *of* 0.015<0.05, meaning a significant relationship between knowledge and market waste management. Traditional. The PR value is 1.280 and 95% CI 1.070-1.533, which means that respondents with poor knowledge are 1.280 times more

likely to have poor traditional market waste management than respondents with good knowledge.

The table above shows that almost all (97.1%) respondents have a terrible attitude toward waste management, with a p-value *of* 0.023<0.05, meaning a significant relationship between attitudes and traditional market waste management. The PR value is 1.264 and 95% CI 1.082-1.477, which means that respondents who have a bad attitude are 1.264 times more at risk of having poor traditional market waste management than respondents who have a good attitude. Based on the table above, the results show that almost all (85.5%) respondents aged >35 years have poor waste management, with a p-value. Of 0.928>0.05, there is no significant relationship between age and management. Traditional market waste. The PR value is 0.961, and 95% CI is 0.786-1, which means that respondents aged >35 years are 0.961 times more at risk of having poor traditional market waste management than respondents aged <35 years.

Based on the table above, the results show that most (78.2%) respondents with higher education levels (SMA, PT) have poor waste management; a p-value *of* 0.079>0.05 means that there is no significant relationship between education and traditional market waste management. The PR value of 95% CI is 1.026-1.418, which means that respondents with low education are 1.206 times more likely to have poor traditional market waste management than respondents with higher education. Based on the table above, the results show that almost all (91.7%) respondents have waste disposal facilities that are not good for waste management, with a P-Value of 0.001<0.005, meaning that there is a significant relationship between waste disposal facilities and traditional market waste management. The PR value is 1.650 and 95% CI 1.085-2.509, which means that respondents with poor waste disposal facilities are at risk of 1.650 times having poor waste management compared to respondents who have good disposal facilities.

Discussion

Waste is solid waste material from daily human activities that no longer has a function for humans. Because waste comes from human activities, the generation of waste will always be there and can even increase every day (UU RI Nomor 18 Tahun 2008). Some of the principles contained in waste, namely: (1) The existence of a solid material or object, (2) There is of a direct or indirect relationship with human activities or activities, and (3) Materials or objects that are not reused (Notoatmodjo, 2011). Several factors that influence the increase in waste every day are population density, community activities, social and economic levels of society, climate, geographical factors, and technological advances (Anto, 2020)

The waste consists of several types, including organic and non-organic waste (Sembiring, 2017), which, if can not manage properly, will impact health and the

environment. Therefore, it is necessary to implement waste management to prevent this impact. Waste management is an activity that intends to make waste a resource to improve public health and environmental quality by reducing and handling waste. Waste management activities include storage, collection, transportation, and final disposal (Sumantri, 2013). One of the places where good waste management must be carried out is in the market. A market is a public place that generates a lot of waste (Damayanti, 2021), especially in traditional markets whose waste management is still not good. Several factors influence waste management market knowledge, attitudes, waste disposal facilities, market management officers, and applied regulations (Notoatmodjo, 2011).

Conclusion

From the results of research conducted at Aur Duri Market, Jambi City, it can be concluded that there is a relationship between knowledge, attitudes, and waste disposal facilities on waste management. Meanwhile, there is no relationship between age and education level in waste management.

References

Anto, A. dkk. (2020). Analisis Tingkat Partisipasi Pedagang Dalam Pengelolaan Sampah Pasar Tradisional Kota Kendari. *JAGAT (Jurnal Geografi Aplikasi Dan Teknologi)*, *4*(2), 1–8.

Astuti, W. dkk. (2019). Partisipasi Pedagang dalam Pengelolaan Sampah di Pasar Tradisional Banjar Adat Mambal Kajanan Badung Bali. *Jurnal Higiene*, *Vol.5 (3)*, 165–176.

Badan Pusat Statistik. 2020. Hasil Sensus Penduduk (September 2020). Jakarta.

Damayanti, M. (2021). Gambaran Pengelolaan Sampah Di Pasar Kota Agung Kecamatan Kota Agung Kabupaten Tanggamus. *Ruwa Jurai: Jurnal Kesehatan Lingkungan*, *13*(2), 81. https://doi.org/10.26630/rj.v13i2.2783

Dinas Lingkungan Hidup. 2020. Potensi Timbulan Sampah. Jambi.

Notoatmodjo, S. (2011). *Kesehatan Masyarakat: Ilmu dan Seni*. PT. Rineka Cipta.

Oktarizal, Hengky, dkk. (2021). Perilaku Pedagang Terhadap Pengelolaan Sampah Di Pasar Bestari Bintan Center Kota Tanjungpinang Tahun 2020. *Kesehatan Ibnu Sina*, *2*, 46–54.

Sembiring, S. B. (2017). *Tinjauan Sistem Pengelolaan Sampah di Pasar Kota Kabanjahe Kabupaten Karo*.

Setiawan, I. (2017). *Pengelolaan Sampah pada Dinas Pasar Kebersihan dan Tata Kota*. *2*(2), 91–105.

Sistem Informasi Pengelolaan Sampah Nasional (SIPSN). 2020. Capaian Kinerja Pengelolaan Sampah Tahun 2020. Jakarta.

Sumantri, A. (2013). *Kesehatan Lingkungan*. Kencana Prenada Media Group.

Undang-Undang Republik Indonesia Nomor 18 Tahun 2008 tentang

Pengelolaan Sampah. Jakarta.

Wasilah, S. dkk. (2017). Pasar Tradisional dengan Penataan Modern di Kota Makassar. *Nature (National Academic Journal of Architecture)*, *4*, 11–20.