



The Influence of Knowledge, Attitude, and Family Supports on the Behavior of Utilization Garbage in Kendari City

Sarif Febriandi¹✉, Asih Kuswardinah², Eunike Raffy Rustiana²

¹ Universitas Indonesia Timur, Indonesia

² Universitas Negeri Semarang, Indonesia

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Abstract

Garbage was unused leftover goods. The middens in the city of Kendari in 2017 were 200 tons/day and in 2018 amounted 229.46 tons/day of unmanaged garbage around 10.29 tons/day. The purpose of this was to analyze the influence of knowledge, attitude, and family supports on the behavior of the utilization of garbage in Kendari city. This study was using *cross sectional* design. The sampling technique of this study were *Stratified Random Sampling* and *purposive sampling techniques*. The population in this study was all the people of Kendari city. Samples amounted to 400 respondents. The instrument was using questionnaire. Data were analyzed using univariate, bivariate with *Chi square* with a significance level of 5% ($\alpha = 0.05$) and multivariate with logistic regression. The result of *Chi square* test showed that there was a significant relationship between knowledge ($p=0.000$; OR=2.481), attitudes ($p=0.014$; OR=1.829), family support ($p=0.001$; OR=2.398) on the behavior of the utilization garbage. The logistic regression results show that knowledge has the most influence on the behavior of garbage utilization. The society was expected to dispose of garbage in the place that has been provided and processing garbage.

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✉ Correspondence Address:

Kaleleng, Sinjai Tengah, Sinjai, Sulawesi Selatan, Indonesia
E-mail: syariffabriandi02@gmail.com

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INTRODUCTION

Indonesia is the country with the fourth largest population in the world in estimate will reach a total of 284.83 million people from 238.52 million in 2010. This amount will continue to grow up to 305.65 million in the year of 2025 (Badan Pusat Statistik, 2017).

From the result of the study in university of Georgia conducted in 192 countries there are 5 largest garbage producing countries in 2010, one of which is Indonesia which accounted for 3.2 million tons per year, there is estimated 8 million tons of plastic waste thrown into the ocean Every year in the world (Jambeck et al., 2015).

An estimated 8300 million metric tons (MT) of plastics have been produced at this time. At 2015, about 6300 MT of plastic garbage has been produced, about 9% of which has been recycled, 12% burned, and 79% accumulated in landfills or natural environments. If the current production and garbage management trends continue, about 12,000 MT of plastic garbage will be in landfills or in natural environments in the year 2050 (Geyer et al., 2017).

The results of research conducted on campus indicate that knowledge and attitudes are less influential on garbage processing behavior (Saputra & Mulasari, 2017). The results of research stated that family support has a role in changing health behavior (linzalone et al., 2017).

The results of research conducted in the city of Padang Panjang show that there was a significant relationship between knowledge, attitude to the behavior of people in throwing waste with the level of influence of 9.53 and 4.6 times (Yulida et al., 2015). The results of this study were almost the same as the results of research conducted in Kendal stated that the perception of low society against garbage affects the appearance of behavior in throwing garbage in rivers in because age, gender and educations (Isthofiyani et al., 2016).

The results of the study stated that the informal education received by the public through socialization and training on the processing of organic and non-organic garbage affects the public awareness in the processing of garbage due to

processed products can be economically valuable (Findayani, 2015). The training model on the job training aims to improve people's knowledge and attitude in garbage processing and improve work productivity as an additional job (Banowati, 2015).

The results of the research conducted in Agam district showed that there was no planning in the management of garbage but the implementation in the processing of garbage has been done rural communities by making compost but there are still communities that garbage not in the current place (Sari, 2016).

The results of the research conducted in Banjarmasin showed that people who have practices, knowledge, and behavior are not good in garbage management so that it is necessary to give environmental promotion about waste disposal improve the health and safety of the surrounding (Hanafi et al., 2018).

Based on the results of research that has been done by some researchers' shows that knowledge, attitudes, and family support have a connection to the behavior of people in the utilization of garbage bins. The lack of knowledge, attitudes, and family support was not necessarily a significant effect on the behavior of society because it is influenced by gender, age, occupation and public education

The results of the study stated that there were differences in the behavior of people in throwing garbage in their place according to the color of trash before and after given *live* and *symbolic* (Anifa et al., 2017).

In Kendari city with a population of 356,594 and an area of 295.89 km² in 2017 about 200 tons/days of garbage and in 2018 the garbage that is piled up at the landfill of 229.46 tons/days and unmanaged garbage around 10.29 tons/days at 2018 indicates that an increase in garbage annually. Based on the garbage source in the city of Kendari in 2017 household garbage heap 41.13%, office garbage 4.48%, traditional market garbage 19.01%, and business center garbage 11.56%, public facilities waste 5.62%, landfill area 2.74%, and heap other garbage 15.47% (National

Garbage Management Information System, 2017). The purpose of this research was to analyze the influence of knowledge, attitudes, and the support of the family in the behavior of the garbage bin utilization in Kendari city.

METHOD

This research was a quantitative study using cross sectional design. The population in the study was the entire society of Kendari that

amounted to 370728 people. The sampling techniques in this study were using stratified random sampling and purposive sampling with a sample amount of 400 peoples.

Variables in this study consisted of independent variables were knowledge, attitudes and the dependent variable was the behavior of the use of garbage. The data were analyzed using univariate analysis, bivariate analysis using Chi square and multivariate analysis using logistic regression.

RESULT AND DISCUSSION

Table 1. Characteristics of research subject based on age, gender, education and occupation

No.	Characteristics	Frequency	Percentage (%)
1.	Age		
	18-54	400	32.81
2.	Gender		
	Male	221	55.2
	Female	179	44.8
3.	Education		
	SMP	42	10.5
	SMA/SMK	182	45.2
	DIII	9	2.2
	SI/DIV	165	41.2
	S2	2	0.5
4.	Occupation		
	University students	28	7.0
	Entrepreneur	134	33.5
	IRT	88	22.0
	Fisherman	30	7.5
	PNS	116	29.0
	Police	2	0.5
	TNI	2	0.5

Table 1 shows that out of 400 research subjects were obtained on average at age (32.81%). Most of the male gender (55.2%) and women were (44.8%). Most of the subjects had a high school/vocational education (45.2%) and

small proportions were educated as masters (0.5%). Most subjects work as entrepreneurs (33.5%) and in small portion of the subject worked as police and army (0.5%)

Tabel 2. Univariate analysis of knowledge, attitude, and family supports of the utilization garbage behavior

No	Variables	n	%
1.	Knowledge		
	Less	276	69.0
	Good	124	31.0
2.	Attitude		
	Less	268	67.0
	Good	132	33.0
3.	Family Support		
	Unsupported	284	71.0
	Supported	116	29.0
4.	Behavior		
	Bad	301	75.2
	Good	99	24.8

Table 2 shows that of the 400 research subjects obtained, most of the people had less knowledge (69.0%) and a small portion of the community had good knowledge (31.0%). Most of the people have fewer attitudes (67.0%) and a small proportion have good attitude (33.0%).

Most of the community does not have family supports (71.0%) and a small portion of the community has family support (29.0%). Most people have bad behavior (75.2%) and some people have good behavior (24.8%).

Tabel 3. Bivariate analysis of knowledge, attitudes, and family supports of the garbage utilization behavior

Variables	Categories	Behaviors		OR	CI (95%)		p
		Bad (%)	Good (%)		Min	Max	
Knowledge	Less	223 (80.8)	53 (19.2)	2.481	1.548	3.977	0.000
	Good	78 (62.9)	46 (37.1)				
Attitude	Less	212 (79.1)	56 (20.9)	1.829	1.145	2.921	0.014
	Good	89 (67.4)	43 (32.6)				
Family Supports	Unsupporte d	228 (80.3)	56 (19.7)	2.398	1.489	3.864	0.001
	Supported	73 (62.9)	43 (37.1)				

* Chi-square test

Table 3 shows the results of the chi-square test which shows that knowledge is significantly related to the behavior of the community in the use of garbage bins with a value of $p = 0.000$ and value $OR = 2.481$ which means that people with a lack of knowledge they have the opportunity to behave 2,481 times. The results of this study were in accordance with the theory posed by Lawrence Green in Notoatmodjo who states that knowledge has an influence on the change in peoples' behavior.

The results of the research conducted in Padang Panjang stated that knowledge has a significant relationship to the behavior of people in removing garbage river with the value $P = 0.000$ and $OR = 9.53$ (Yulida et al., 2015).

Knowledge is one of the *Predisposing* factors in the formation of community behavior. In this case the knowledge influenced several factors and one of which is information from the media information, the more someone receives information then one's knowledge will increase (Sukendra et al., 2017).

The results of the study stated that the public knowledge of garbage is only limited to the understanding of waste as an unused leftover goods and able to distinguish waste that can be sold and not. But the knowledge of society is not coupled with high motivation in sorting out garbage and tends to think economically (Isthofiyani et al, 2016).

The results of this study also show that public knowledge will increase after obtaining information about the utilization of the garbage (Vironica, 2012).

This can be because the subject in this research is a community aged 18-55 years that is dominated by high school education so that knowledge is lacking about the utilization of garbage bins. In this case the knowledge of society in throwing garbage in its place in good category ranged from 18-45 years (Widiyanto et al., 2019)

Knowledge is an important domain in the formation of community behaviour in the utilization of garbage bins. Through health promotion, and advocacy that disseminated through information media to influence people's behavior in dumping garbage for environmental sustainability (Ediana et al., 2018).

The behavior of dumping garbage in the right place clearly affects the environment of residence. Environmental health problems in the start of the behavior of wasting garbage so that the symptoms arise, this signifies the development of less aware of the impact on the environment (Darmawan & Fadjarajani, 2016).

Table 3 shows the results of the *chi square test* indicating that attitudes are significantly related to the behavior of people in the utilization of bins with a value of $P = 0.014$ and value $OR = 1,829$ which means that society with less attitude has the opportunity Behave 1,829 times. The results of this study correspond to the theory posed by Lawrence Green in Notoatmodjo who stated that knowledge has an influence on the change in peoples' behavior.

Attitudes are part of the *predisposing* factor in changing community behaviour. This is due to a positive attitude both in terms of liking, caring, approaching and active in the utilization of bins (Pambudi & Sudaryantiningasih, 2017). This is

make people aware the importance of caring for garbage because garbage can generate added value in the economy and has a big benefit (Widodo, 2010).

The results of the research conducted in Tegal show that there is a significant relationship between the management of the garbage to dermatitis, respiratory infections, and diarrhea. However, it is only limited to symptoms such as decreased appetite, dilute stool, rapid or undiluted pulse, and itchy skin (Widiastuti & Yuniastuti, 2017).

The attitude of dumping garbage is not just throwing garbage in the tong but instead of sorting garbage by grouping types of garbage both organic and inorganic (Almanda et al., 2018). The encouragement of attitude to dispose of garbage in the right place indicates that the community receives information positively by accepting the suggestions they get (Alfikri et al, 2018).

The results showed that attitude has a significant relationship to people's behavior in disposing of garbage and to obtain a good attitude requires regular counseling about garbage management and the danger of garbage for health (Yulida et al., 2015).

Table 3 shows the results of the *Chi square* test indicating that the family support significantly has a relationship to community behaviour in the utilization of bins with a value of $P = 0.001$ and a value of $OR = 2,398$ which means society with less attitude Have the opportunity to behave 1,829 times. The results of this study correspond to the theory posed by Lawrence Green in Notoatmodjo who says that family support has an influence on the change in one's behavior. The results of this study correspond to the theory posed by Lawrence Green in Notoatmodjo who says that family support has an influence on the change in people's behavior.

Family support is generally aimed at learning, establishing good communication, open, and being able to provide emotional support, instrumentals, judgments, and informational (Triyanto et al., 2014). Starting from early childhood education gained in the family so that the habit of being well planted (Larasati et al, 2015).

The results of the study conducted in Yogyakarta showed that in reducing the garbage deposits that entered in the landfill need to be done by the complainants conducted by the community (Sudiby et al., 2017). In this case, the encouragement of family support will increase the activity of people in the use of garbage cans; otherwise if the encouragement of the family is lacks support, the activity will also decrease in the use of garbage bins (Umayana & Cahyati, 2015).

Based on the results of the research saying that the ability of family support is able to give the right decision and the important role in providing motivation, this is in because family as a basic education received by someone other than a formal school (Rosdiana, 2018).

Family support is obtained from the most influential people and is able to provide motivation in the utilization of the bins in the family for example parents. In line with the results of research saying that there is a family support relationship to health behaviour, it is based on the role of parents who directly remind and do not

hesitate to provide health information (Ningrum & Indriyanti, 2018).

In this case the family support as a factor in the handling of waste produced by households. In line with the results of the study saying that family support has roles and responsibilities in removing the garbage of (Hanafi et al., 2018). But the influence of family support can also be influenced by the midlife in the family as the person who provides support has great influence or not, gender, education, and age (Wan et al., 2018)

The efforts to prevent landfill can be started from the family such as reducing the consumption pattern of plastic bags, buying goods according to usage, recycling and not burning rubbish in the surrounding environment. In line with the study that stated that garbage reduction potential such as easy rot, inorganic waste, organic, household garbage, cost, and food stalls can produce economic value (Windraswara & Prihastuti, 2014)

Table 4. Multivariate analysis of knowledge, attitudes, and family supports of the garbage utilization behavior

Variables		B	S.E.	Wald	Df	Sig.	Exp (B)	95,0% C.I.for EXP(B)	
								Lower	Upper
Step 1 ^a	PNG(1)	-1,165	,815	2,041	1	,153	,312	,063	1,542
	SKP(1)	,300	,409	,539	1	,463	1,350	,606	3,008
	DK(1)	,017	,756	,001	1	,982	1,017	,231	4,477
	Constant	-,567	,199	8,075	1	,004	,567		
Step 2 ^a	PNG(1)	-1,149	,407	7,959	1	,005	,317	,143	,704
	SKP(1)	,300	,409	,539	1	,463	1,350	,606	3,008
	Constant	-,565	,193	8,557	1	,003	,568		
Step 3 ^a	PNG(1)	-,909	,241	14,262	1	,000	,403	,251	,646
	Constant	-,528	,186	8,069	1	,005	,590		

Table 4 shows the results of a multivariate analysis that the most dominant knowledge of people's behavior in the utilization of garbage bins in Kendari City with value OR 0.403 (CI 95%: 0.251 - 0.646). The results showed that there was the influence of knowledge on the behavior of people in the utilization of garbage bins.

CONCLUSION

Knowledge is significantly related to the behavior of people in the utilization of bins with the value $P = 0.000$ and the value of $OR = 2,481$ which means that society with a lack of knowledge has the opportunity to behave 2,481 times.

Attitudes are significantly related to the behavior of people in the utilization of bins with a value of $P = 0.014$ and value $OR = 1,829$ which means that society with less attitude has the opportunity to behave 1,829 times.

The family support has a significant relationship to the behavior of people in the utilization of bins with a value of $p = 0.001$ and the value of $OR = 2,398$ which means that society with less attitude has the opportunity to behave 1,829 times.

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