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**EXPLORATION OF COMMUNITY KNOWLEDGE AND ATTITUDE
ON MASK WASTE MANAGEMENT IN THE KAMPUNG BARU
SUB-DISTRICT**

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ABSTRACT

Mask waste can cause environmental pollution and sources of disease spread if not properly managed. The purpose of the study was to determine the influence of knowledge and attitudes of the community on the waste management of disposable masks in Kampung Baru Sub-District. The type of research used is analytical research with a cross-sectional design. The study population was 3,692 households with a sample size of 361 respondents. Sampling using a purposive sampling technique. Data analysis using Chi-square test. The characteristics of respondents are known to be the gender of the majority of women (58.4%), age 46-64 years (48.5%), the last dominant education is high school (41.3%), and work as IRT (42.4%). There is a significant relationship between knowledge (p-value 0.000) and attitude (p-value 0.000) with disposable mask waste management. It is expected that the role of the government in providing education to the community by conducting counseling on how to manage waste masks is good and correct to prevent environmental pollution and disease transmission

Keywords: Knowledge, Attitude, Mask waste

BACKGROUND

The covid-19 pandemic that has occurred in the world has prompted the government to take efforts to prevent transmission by limiting the outdoor activities together. The government must immediately conquer the threat of Covid-19 to prevent wider transmission. One of the government's efforts to prevent the spread of Covid-19 is the use of masks. Masks are one of the main needs during the Covid-19 pandemic. The use of masks is one of the efforts to prevent the spread of the COVID-19 virus. One type of mask used in the community is a disposable mask (Atmojo et al., 2020).

The use of masks is an overall infection control carried out through social distancing, hand hygiene compliance, and other measures that form integrated preparedness to prevent the transmission of Covid-19. For groups of people who are at high risk of infection, wearing a cloth mask with low filtering efficiency may be better than

not wearing a mask at all because it does not protect against risk (Acute & Syndrome, 2020).

The increase in the use of single-use masks during the pandemic occurred throughout the world, through a study conducted by (Sangkhom, 2020), it was found that the estimated daily use of masks in several Asian countries reached 2,228,170,832 masks. The use masks has created a new problem, namely an increase the amount of disposable mask waste. Mask waste during a pandemic can be classified as infectious waste if it comes from a person infected with COVID-19. Therefore, waste masks must be disposed of properly according to the disposal of infectious waste. Improper management of mask waste can cause pollution to the environment.

During the Covid-19 pandemic, the amount of medical waste generated in Indonesia increased by 30%-50%. According to records from the Indonesian Institute of Sciences (LIPI), it is known that from March to September 2020, the amount of medical waste stockpiled is estimated to be 1,662.75 tons. The achievement of waste generation in 2021 consisting of 201 regencies/cities throughout Indonesia amounted to 40,872,614.38 tons per year (Surat Edaran Nomor. SE.3/MENLHK/PSLB3.3/3/2021 Tentang Pengelolaan Limbah B3 Dan Sampah Dari Penanganan Corona Virus Disease-19, 2021)

Disposal of disposable mask waste generated from the community is regulated by the Ministry of Environment and Forestry and the Ministry of Health through Circular No. 2 of 2020. Processing of disposable mask waste includes collection, separation of mask waste from kitchen waste, spraying disinfectant on masks, and changing the shape of masks. Before disposal, wrap the mask waste in a plastic bag, and wash your hands with soap after disposing of the mask waste (WHO, 2020).

According to the UNPAD-ITB collaboration article, AMARI COVID-19 (2019 Corona Virus Disease Insights Application), medical masks or disposable masks are made of polypropylene, a type of plastic. When this plastic decomposes, it will turn into micro-plastics and shrink into nano-plastics. When there is a change into micro-plastic, then at that time plastic produces toxins and organic pollutants. Micro-plastics can cause poisoning when marine animals ingest them. In addition, mask waste can also attract animals, some animals think masks are food and eat them, then die after being swallowed by the mask (Admamari, 2021). Garbage is a source of disease transmission if not managed properly. Not only medical waste can be a source of disease transmission, but household waste that is mixed without being sorted can also potentially become a medium for disease transmission (Juwono & Diyanah, 2021).

Based on the initial survey conducted, it is known that the people who live Kampung Baru sub-district, it is known that 9 out of 10 people do not know how to manage mask waste properly, mask waste is still thrown into the trash without managed. Mask waste produced by the community is not disinfected, not damaged and not wrapped in plastic before being disposed of in the trash. 8 out of 10 people mix mask waste with household waste and transport is not done every day, but waiting for the garbage in the trashcan to be full. There are also 4 out of 10 people who throw mask waste into the sea.

Based on the background above, the authors feel the need to conduct research on the Effect of Knowledge and AttitudesCommunity towards Mask Waste Management in Kampung Baru in 2022".

RESEARCH METHODS

This research uses an analytical type with cross sectional design. The study population was 3,692 households with a sample size of 361 respondents. Samples were taken using a purposive sampling technique. Inclusion criteria are respondents who are

domiciled in Kampung Baru Sub-District, willing to be interviewed, productive age range of 15-64 years, can read, and can communicate well. The independent variable in this study is the knowledge and attitude of respondents, while the dependent variable is waste management disposable masks. Data were collected by distributing questionnaires and conducting the direct observation. Data analysis using Chi-square test.

RESULT AND DISCUSSION

Characteristic of Respondents

This study was conducted to determine the effect of knowledge and attitudes on the management of disposable mask waste in the community in Kampung Baru Sub-District. The results of data collection and processing can be seen in the following table:

Table. 1 Characteristic of Respondents in Disposable Mask Waste Management

No	Characteristics of Respondents	Waste management						<i>p-value</i>	QR
		MS		TMS		Total			
		n	(%)	n	(%)	n	(%)		
Gender									
1	Male	3	2	147	98	150	100	0.615	0.004
2	Female	4	1.9	207	98.1	211	100		
Total		7	1.9	354	98.1	361	100		
Age									
1	15 - 25	1	3.2	30	96.8	31	100	0.193	0.095
2	26 - 45	5	3.2	151	96.8	156	100		
3	46 - 64	1	0.6	173	99.4	174	100		
Total		7	1.9	354	98.1	361	100		
Work									
1	Housewife	0	0	153	100	153	100	0.000	307
2	Laborer	0	0	35	100	35	100		
3	Private	2	1.9	102	98.1	104	100		
4	civil servant	4	17.4	19	82.6	23	100		
5	Trader	0	0	25	100	25	100		
6	Student/Student	1	4.8	20	95.2	21	100		
Total		7	1.9	354	98.1	361	100		
Education									
1	No education	0	0	21	100	21	100	0.001	0.233
2	Primary school	0	0	61	100	61	100		
3	Junior High School	1	1.3	78	98.7	79	100		
4	Senior High School	1	0.7	148	99.3	149	100		
5	Collage	5	9.8	46	90.2	51	100		
Total		7	1.9	354	98.1	361	100		

Note: MS : Eligible
TMS : Not Qualified

Based on table 1, it can be seen that the respondents in Kampung Baru Sub-District are mostly female respondents (58.4%) where 1.9% of them are female respondents who can manage waste according to the rules. Meanwhile, 41.6% of male respondents with the percentage of respondents who can manage waste by the rules are slightly higher than female respondents, which is 2%. The statistical test carried out is known by using an error rate of 5%, obtained a significance value of 0.615. This value is greater than 0.005 which indicates that there is no significant relationship between gender and waste management in

the new Sub-District community. This can also be seen from the very small correlation magnitude, which is 0.004.

Although based on statistical analysis there is no evidence of a relationship between gender and the management of disposable mask waste, it is generally known that women or housewives have a greater role in controlling the cleanliness of their home environment, especially in handling waste generated from family activities. According to (Rochayati et al., 2018), involving the community in the management of mask waste, means that women's participation does not escape. Women have a big role in educating and building awareness to protect the environment.

Most of the people of Kampung Baru Sub-District who became respondents were people with ages in the range of 46-65 or 48.2%. When viewed from the MS method of waste management, 3.2% of respondents aged 26-45 and 0.6% of the age group 46-65 can manage waste well. On the other hand, 1 out of 3 respondents aged 15-25 are respondents who can manage waste well. Based on the statistical test obtained a significance value of 0.193. This value is greater than 0.005. This shows that there is no significant relationship between age and waste management in the new Sub-District community. This can also be seen from the very small correlation magnitude, which is 0.095.

This study is in line with research conducted by (Srisantyorini & Kusumaningias, 2018), which is that there is no significant (meaningful) relationship between age and waste management behavior (p-value = 0.901). However, from the data obtained, respondents in late adulthood tend to carry out waste management behavior compared to respondents with young adults. This study is in line with the research of Best, 2015 with the results of the statistical test p-value = 0.708 so that it can be stated that there is no significant relationship between age and waste management behavior.

The results showed that in adults, more people know how to manage waste masks that meet the requirements compared to young and elderly people. It is assessed that adults have a stronger will to protect the environment by managing single-use mask waste. The characteristics of respondents based on age in Kampung Baru Sub-District are more in the age range of 46-64 years and this age includes the elderly age group in a health perspective based on the stages of mental development along with physical conditions (Hakim, 2020).

According to (Tansatrisna, 2014), productive age starts from the age of 15-65 years, where at that age a person is still able to work to produce goods or services, to meet their own needs and the needs of the community. People with productive age can be capital in development. The majority of respondents in this study are classified as productive age.

The majority of the people in Kampung Baru Sub-District who became respondents in this study were housewives (42.4%), then private (28.8%). Meanwhile, the percentage of people from other occupations, such as laborers, civil servants, tradesmen, and students, is less than 10% each. Community groups that can manage waste according to the requirements are civil servants (57.1%), the private sector (28.6%), and students (14.3%). Meanwhile, housewives community groups, laborers, and traders cannot manage waste properly. A statistical test using an error rate of 5%, obtained a significance value of 0.000. This value is smaller than 0.005. This shows that there is a significant relationship between work and waste management in the community in Kampung Baru Sub-District. The magnitude of the relationship between the two variables is 0.307. This value indicates that although there is a significant relationship between work and waste management, the relationship is low, which is only 0.307.

Based on the respondent's occupations, it is known that the majority of the respondents are housewives. This certainly affects waste management, especially mask waste in the surrounding environment. Housewives have more time to pay attention to the

cleanliness of their environment, but housewives do not have enough information about how to properly manage disposable mask waste, so they have not managed mask waste properly. Housewives are not only considered the most knowledgeable about waste problems at home but are also considered capable of making a real contribution to the management of mask waste (Solihin et al., 2019)

The distribution of people in the Kampung Baru sub-district who became respondents based on their latest education were: Senior high school(41.3%), junior high school (21.9%), elementary school (16.9%), PT (14.1%), not in school 5.8%. When viewed from the MS method of waste management, less than 10% of PT respondents can manage waste properly. Meanwhile, respondents with elementary school graduates / not attending school, cannot carry out waste management according to the requirements. A statistical test using an error rate of 5%, obtained a significance value of 0.001. This value is smaller than 0.005. This shows that there is a significant relationship between education and waste management in the new Sub-District community. The magnitude of the relationship between the two variables is 0.233. This value indicates that although there is a significant relationship between education and waste management, the relationship is low, which is only 0.233.

The results showed that the higher a person's education, the better the management of disposable mask waste. This is known from the number of respondents who can properly and correctly manage the waste of disposable masks, which are respondents with higher education. People with higher education have a long mindset for the future, while people with low education only think short for now, so people with higher education tend to be more aware and behave well towards their surroundings environment. Notoatmodjo (2014), says that education is one of the factors that influence a person's mind to more easily accept new knowledge (Lillah, 2017).

Education is an effort to increase knowledge and change attitudes, so that respondents who have higher education can have good behavior in the management of mask waste (Sari & Mulasari, 2017). Adequate education in this case is the category of high school education level that will be more aware of good mask waste management, such as people who are educated enough to seek to improve waste management through waste banks (Setyaningrum, 2015).

The Effect of Knowledge on Disposable Mask Waste Management

Based on Chi-square analysis, the relationship between knowledge and waste management of disposable masks obtained results in table 2.

Table. 2 The Effect of Knowledge on Disposable Mask Waste Management

No	Knowledge	Mask Waste Management						<i>p-value</i>	QR
		MS		TMS		Total (%)			
		n	%	n	%	n	%		
1	Well	3	100	0	0	3	100	0.000	0.546
2	Bad	4	1.1	354	98.9	358	100		
Total		7	1.9	354	98.1	361	100		

Note: MS : Eligible
TMS : Not Qualified

Table 2 shows that the majority of people in the Kampung Baru sub-district have poor knowledge regarding waste management. Of the 361 people who became respondents, 358 (99.2%) were people who did not have good knowledge of managing waste. Only less than 1% of the community (3 people) have good waste management knowledge. In managing waste, as many as 98.1% of people do not do it according to

existing standards, and only 1.9% of people can manage waste properly and following the requirements. 1.9% of the respondents consisted of 3 respondents who had good waste management knowledge plus 4 respondents who did not have good knowledge but could properly manage waste.

The results of statistical analysis using an error rate of 5%, obtained a significance value of 0.000. This value is smaller than 0.005, meaning that there is a significant relationship between knowledge and waste management in the Kampung Baru Sub-District community. The magnitude of the relationship between the two variables is 0.546. This value indicates that there is a moderate or strong relationship between knowledge and waste management in the new Sub-District community.

According to Notoatmodjo (2010), knowledge is the result of knowing, and this occurs after a person has sensed a certain object. In addition, knowledge can also be obtained through formal and informal education. Knowledge is very important for the formation of a person's actions. Knowledge is a person's ability to remember something (ideas, phenomena) that has been taught. Public knowledge about the management of mask waste is built based on the ability to think in accordance with the reality found by the surrounding community. The older they get, the more their grasping power and mindset will develop so that the knowledge they gain is getting better (Budiman & Riyanto, 2014).

Research conducted by Ruslinda states that public knowledge about the dangers of mask waste is considered to be lacking, where people still mix mask waste with other household waste (Ruslinda et al., 2020). There are obstacles in the management of household mask waste which include the community's indifference and the unavailability of adequate facilities and infrastructure (Putra et al., 2019). It is known that respondents with waste are still poor because respondents think that waste management is the responsibility of the relevant agencies (May Erviana Safitri, 2019).

The results of this study are in line with research conducted by (Tayeb, M., Daud, 2021), responden knowledge has a significant relationship with waste management in the community in Manggala District, Makassar City. Education for community groups can make behavioral changes so that efforts can be made to increase public knowledge, namely through counseling, especially regarding the handling of disposable mask waste and good and correct management methods to control environmental pollution.

The Effect of Attitude on Disposable Mask Waste Management

Chi-square analysis was conducted to determine the relationship between attitude and waste management of disposable masks known results in Table 3.

Table. 3 The Effect of Attitude on Disposable Mask Waste Management

No	Attitude	Mask Waste Management						<i>p-value</i>	QR
		MS		TMS		Total (%)			
		n	%	n	%	n	%		
1	Well	0	0	184	100	184	100	0.006	0.142
2	Bad	7	4.0	170	96	177	100		
Total		7	1.9	354	98.1	361	100		

Note: MS : Eligible
TMS : Not Qualified

Table 3, explains that the percentage of people in Kampung Baru Sub-District who have good and bad attitudes is almost balanced, where 51% of people have good attitudes, and another 49% have bad attitudes. Uniquely, although 51% of the community in the new Sub-District have a good attitude, none of them can apply this attitude in managing waste by applicable standards. On the other hand, even though it is dominated by TMS waste

management, 4% of the community can manage waste that meets the requirements for waste management.

Based on the statistical test, it is known that using an error rate of 5%, a significance value of 0.006 is obtained. This value is smaller than 0.005. This shows that there is a significant relationship between attitudes and waste management in the new Sub-District community. The magnitude of the relationship between the two variables is 0.142. This value indicates that although there is a significant relationship between attitudes and waste management, the relationship is not very strong (very low), which is only 0.142.

The results of the study illustrate that there are still respondents who have bad attitudes but can carry out waste management that meets the requirements. This shows that respondents know how to manage the waste of disposable masks that meet the requirements, but this is not reflected in attitudes. According to Notoatmodjo (2012), behavior change starts from the knowledge stage which will affect attitudes and attitudes will be manifested in the form of action as a form of application of the knowledge they have.

The management of mask waste is influenced by information obtained through conditioning or processing received information and encouraging it by motivating in making decisions to approve, reject, or be neutral (Fentia & Ningsih, 2020). Attitudes may change based on experience and information received. Providing information to the public, in general, is an activity that aims to influence the way others think, behave, or act.

The attitude of the community in the management of mask waste depends on the factors that influence the attitude of the community. Attitude formation is influenced by several factors, namely personal experience, culture, other people who are considered important, mass media, educational institutions, and religious institutions, and emotional factors (Rahmi & Luthfia, 2018).

CONCLUSION AND RECOMMENDATION

Based on the research carried out, it can be concluded that statistical analysis of the effect of knowledge and attitude on the management of disposable mask waste is known to have a significant. It is hoped that the government's efforts to socialize the handling of disposable mask waste in Kampung Baru Sub-District, to increase public knowledge in managing disposable mask waste in a good and correct way and be able to reduce environmental pollution.

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