

**THE INFLUENCE OF KNOWLEDGE AND SUPPORT OF COMMUNITY LEADERS
IN THE APPLICATION OF 3 R (REDUCE, REUSE, RECYCLE) IN HOUSEHOLD
WASTE IN JOHAN PAHLAWAN DISTRICT, ACEH BARAT DISTRICT**

ARFAH HUSNA

Fakultas Kesehatan Masyarakat, Universitas Teuku Umar
arfahhusna@utu.ac.id

ADE IRMA SAFITRI

Fakultas Kesehatan Masyarakat, Universitas Teuku Umar

DARMAWI

Fakultas Kesehatan Masyarakat, Universitas Teuku Umar

AZWAR

Fakultas Kesehatan Masyarakat, Universitas Teuku Umar

FITRAH REYALDI

Fakultas Kesehatan Masyarakat, Universitas Teuku Umar

ABSTRACT:

Based on data from the Department of Environment and Hygiene (DLHK) of West Aceh Regency that waste generation in Johan Pahlawan sub-district is still high every year and the initial observation results of the generation of illegal garbage in household settlements in Johan Pahlawan sub-district (SuakRibee Village, DrienRampak Village, Rundeng Village, UjongBaroh Village). This study aims to determine the description of the application of 3 R in household waste and factors related to the application of 3 R in household waste. The study used a quantitative approach with analytic observational studies and analyzed univariate and bivariate. The study was conducted from 11 to 20 June 2019. The population in the study amounted to 16,493 households. The sampling technique for groups or groups of 106 households was studied. There is a relationship between the knowledge and

support of community leaders with the application of 3 R in household waste

KEYWORDS: 5 to 6 keywords. Knowledge, Application of 3 R, Household Waste.

INTRODUCTION:

Household waste is rubbish originating from daily activities in the household that do not include specific feces and waste. (PP No. 81/2012).

Notoatmodjo S (1996) also mentioned that household waste (domestic waste) is waste that consists of solid materials as a result of household activities that have been used, and discarded, such as: leftovers either cooked or not, used good wrapping paper, plastic leaves and so on, used clothes, reading materials, household furniture, leaves from the garden or park.

Community-based waste management can be used as a reference model that promotes the 3 R paradigm, namely: (Firmanti, A, 2010) R1 (reduce) is an effort that is more focused on reducing consumptive lifestyles and always using "not

disposable" that is environmentally friendly and prevents waste generation. R2 (Reuse) is an effort to utilize waste material through repeated use so that it does not immediately become garbage, without processing means to reuse waste that is fit for use for the same or another function. R3 (Recycle) is that after the garbage has to come out of the home environment, it is necessary to separate and utilize local processing into new products. Waste management with a 3 R pattern is an effort to reduce the burden of waste landfills.

Poor waste management can have a negative effect on health, the environment, as well as on the socio-economic and cultural life of the community, (Chandra B, 2018).

Data from the environment of Aceh Province is known that the amount of waste generation every year changes in 2014 the number of waste generation is known to 14,375.77 M³ / day, in 2015 the amount of waste generation was 474,753.99 M³ / day, in 2016 the amount of waste generation was 408,815.42 M³ / day, in 2017 the amount of waste generation was 343,791,049 M³ / day, the change in the amount of waste annually was influenced by the total population density and people's consumption patterns. (BPS, 2018).

Based on data obtained from the Department of Environment and Hygiene (DLHK) of West Aceh Regency, it shows that waste generation in Johan Pahlawan Subdistrict, West Aceh Regency is still high every year, seen in 2016 as much as 93.39 M³ / day of garbage generated and served as many as 51,3645 M³ / day, in 2017 garbage generation is 98.5335 M³ / day and 59.1201 M³ / day is served, then in 2018 garbage generation is 97.79 M³ / day and 68.45685 M³ / day is served. The high level of waste generation is caused by the fact that

community waste management and waste management are not yet optimal. There is still a pile of illegal rubbish in Johan Pahlawan Subdistrict (SuakRibe Village and Rundeng Village). However, this waste problem is not only the responsibility of the government, but also the community as the main producer of waste (producers) must actively participate in waste management in their respective households (<http://portalsatu.com>).

As a waste producer, every household needs to play a role in handling waste. If done together with the whole community, efforts to deal with waste can provide great benefits for environmental hygiene and public health. Growing awareness for the environment needs to be done by all groups, the government, the private sector and especially the community as contributors and recipients of negative access to pollution. Growing awareness for the environment needs to be done by all groups, the government, the private sector and especially the community as contributors and recipients of negative access to pollution.

METHODOLOGY:

This type of research is quantitative with an observational analytic study using cross sectional design, conducted from 11 to 20 June 2019. The population taken is all household heads who live in Johan Pahlawan Subdistrict. The total population of the study is 16,493 households. The sampling technique uses groups or clusters namely cluster sampling techniques by dividing the study area into groups and setting a sample size of 20% of the total number of villages, then taking a sample of 4 villages. So that the sample taken as many as 106 families who meet the inclusion criteria. Data collection by collecting primary data

and secondary data. Data were analyzed using chi-square with a confidence level of 95%, if the p value is <0.05, then there is a significant relationship between the independent variable and the dependent variable.

DISCUSSION / ANALYSIS:

Univariate Analysis:

Based on Table 1, it is known that the majority of respondents in the application of 3 R are not good (84.9%), most respondents lack knowledge (80.2%), and most respondents do not have the support of community leaders (91.5%)

Variabel	f	%
1. Application 3 R		
Good	16	15,1
Not Good	90	84,9
Total	106	100
2. Knowledge		
Good	21	19,8
Not Good	85	80,2
Jumlah	106	100
3. Support Community Leaders		
Support	9	8,5
Not Support	97	91,5
Total	106	100

Bivariate Analysis:

Relationship of Knowledge in the Application of 3 R (Reduce, Reuse, Recycle) in Household Waste

Table 2 Relationship of Knowledge with the Application of 3 R (Reduce, Reuse, Recycle) in Household Waste

Variable		Application 3 R				Total		Statistic Test	
		Good		Not Good					
		f	%	F	%	F	%	p	OR
Knowledge	Good	15	71,4	6	28,6	21	100	0,000	210
	Not Good	1	1,2	84	98,8	85	100		
	Total	16	15,1	90	84,9	106	100		

Table 2 shows that the percentage of respondents who were not good in applying 3 R in household waste was higher in respondents with less knowledge 84 (98.8%) compared with good knowledge 6 (28.6%). Statistical test results obtained p value = 0,000 (p value <0.05) it was concluded that there was a significant relationship between knowledge and the application of 3 R in household waste. Odds ratio (OR) is known to mean 210 means the family head with less knowledge 210 times the opportunity to apply the 3 R that is lacking.

The Influence of Support of Community Leaders With the Application of 3 R (Reduce, Reuse, and Recycle) in Household Waste

Table 3 Relationship between Supporting Community Leaders and Application of 3 R (Reduce, Reuse, Recycle) in Household Waste

Support of Community Leaders	Application 3 R				Total		Statistic Test	
	Good		Not Good		F	%	p	OR
	F	%	f	%				
- Support	7	77,8	2	22,2	9	100	0,000	34,2
- Not Support	9	9,3	88	90,7	97	100		
Total	16	15,1	90	84,9	106	100		

Table 3 shows that the percentage of respondents who are not good in applying 3 R to household waste is higher in respondents with no support 88 (90.7%) compared to those who get support 2 (22.2%). Statistical test results obtained p value = 0,000 (p value <0.05) it was concluded that a meaningful relationship between support of community leaders with the application of 3 R in household waste. The odds ratio (OR) is known to be 34.2, meaning that the head of the family who does not have the support has a 34.2 chance of applying the lack of 3 R.

DISCUSSION:

Application of 3 R (Reduce, Reuse, and Recycle) in Household Waste:

The results of research conducted on 106 heads of households in the application of 3 R (Reduce, Reuse, and Recycle) showed that the majority of respondents 90 people (84.9%) were not good at applying 3 R in household waste. And 16 people (15.1%) with good 3R implementation. The results of this study are not much different from the research conducted by Rahmawati, R (2016), more than half of respondents (56.3%) applied 3 R poorly.

The results of the 2017 Social Security Module Susenas, show that only 8.7

percent of households always carry their own shopping bags to reduce waste. Whereas households that carry out recycling activities are only 1.2 percent of households, while 66.8 percent of households still burn garbage for handling garbage. (BPS, 2018).

So far, most people still view waste as waste that is not useful, not as a resource that needs to be used. The community in managing waste still relies on the end-of-pipe approach, i.e. the garbage is collected, transported, and thrown to the final waste processing site. In fact, a large volume of landfill waste at the site where the waste is processed has the potential to release methane (CH₄) which can increase greenhouse gas emissions and contribute to global warming. (Law No.18 / 2008).

Waste, with the new paradigm is carried out with waste reduction and handling activities. Waste reduction includes restriction, reuse, and recycling activities, while waste handling activities include sorting, collecting, transporting, processing and final processing. (Law No.18 / 2008).

West Aceh District Government has issued regulation (Qanun) No. 4 of 2017 concerning Waste Management, which stipulates that every person (community) is obliged to maintain the cleanliness of the surrounding environment, actively participates in the reduction and handling of waste, preparing storage in accordance with regulations / standards of environmentally sound waste bins, use materials that can be reused, recycled, and / or easily decomposed by natural processes. In this regulation it is also stated that the management of household and similar household waste must be done on a hamlet, village and / or sub-district scale with technical guidance from the SKPK in charge of waste management.

The Influence of Knowledge by Implementing 3 R (Reduce, Reuse, and Recycle) in Household Waste:

The results showed that the percentage of respondents who were not good in applying 3 R in household waste was higher in respondents with less knowledge 84 (98.8%) compared with good knowledge 6 (28.6%). Statistical test results obtained p value = 0,000 (p value <0.05), it concluded that there was a significant relationship between knowledge and the application of 3 R in household waste.

The results of this study are the same as research conducted by Rahmawati, R (2016). It is known that the percentage of household waste management is less good for respondents with a low level of knowledge (74.4%) compared with a high level of knowledge (41.5%). Statistical test results obtained p value = 0.002 (p value <0.05), it concluded that there was a significant relationship between the level of knowledge with the application of 3 R in household waste.

So far, most people still view waste as waste that is not useful, not as a resource that needs to be used. The community in managing waste still relies on the end-of-pipe approach. i.e. the garbage is collected, transported, and thrown to the final waste processing site. In fact, a large volume of landfill waste at the site where the waste is processed has the potential to release methane (CH₄) which can increase greenhouse gas emissions and contribute to global warming. (Law No.18 / 2008).

Knowledge is the result of knowing, and this happens after people have sensed a certain object. Sensing occurs through the human senses, namely the sense of sight, hearing, smell, taste, and touch. Most of human knowledge is obtained through the eyes and ears. Knowledge or cognitive

domain is a very important domain in shaping one's actions (overt behavior). (Notoatmodjo S, 2012).

It is expected that every community gets information about waste processing 3 R gets guidance in order to be able to carry out waste management that is environmentally sound, in the form of environmental education and outreach and increase counseling. In addition, there is cooperation with related agencies in dealing with waste problems so as to increase public knowledge.

Relationship between Supporting Community Leaders and Application of 3 R (Reduce, Reuse, and Recycle) in Household Waste:

The results showed that the percentage of respondents who were not good in applying 3 R in household waste was higher in respondents who did not get support 88 (90.7%) compared to those who received support 2 (22.2%). The statistical test results obtained the value of p = 0,000 (p value <0.05), it was concluded that a significant relationship between the support of community leaders with the application of 3 R in household waste.

The results of this study are in line with research conducted by Rahmawati, R (2016) showing that there is a significant relationship between the role of community leaders and household waste management.

The community plays an important role in the process of decision making, implementation and supervision in household waste management activities. The form of community role is the provision of education and training, campaigns, and mentoring by community groups to community members in waste management to change the behavior of community members. (PP No.81 of 2012).

Then it can be concluded that the role of community leaders has an important meaning for the success of household waste management. Therefore, efforts are needed to increase the role of community leaders in the field of household waste management. Efforts that can be taken include giving training to community leaders on household waste management with the 3 R principle. In this study the support of community leaders in the application of the 3 Rs can take the form of appeals, submitting suggestions and information about the 3 R principle, monitoring environmental cleanliness and reprimanding residents if there is one who does not manage waste properly.

CONCLUSION:

Based on the results of research conducted on the head of the family, it can be concluded that most of the application of 3 R is not good. Most of the knowledge is lacking, most negative attitudes, most low motivation, most community leaders never support. Further research shows that there is a relationship of knowledge with the application of 3 R, there is a relationship of attitude with the application of 3 R, there is a relationship of motivation with the application of 3 R, and there is a relationship of support of community leaders with the application of 3 R.

LIMITATION AND STUDY FORWARD:

This study uses a cross-sectional design, which is a study conducted at a place by examining several variables simultaneously, in this case the research was conducted in Johan Pahlawan sub-district of West Aceh Regency in 2019, so the results of this study cannot be generalized to other regions

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REFERENCES:

Book

1. Badan Pusat Statistik Jakarta Pusat. 2018. Statistik Lingkungan Hidup Indonesia Tahun 2018. Jakarta Pusat : Badan Pusat Statistik Book chapter
2. Chandra, Budiman. Dr. 2018. Pengantar Kesehatan Lingkungan. Cetakan 2018. Jakarta : EGC
3. DLH. 2018. Buku Data Status Lingkungan Hidup dan Daerah (SLHD) Kabupaten Aceh Barat (IKPLHD). Aceh Barat
4. Firmanti, A. 2010. Modul Pengolahan Sampah Berbasis 3 R. Kementrian Pekerjaan Umum Badan Penelitian dan Pengembangan. Pusat Penelitian dan Pengembangan Permukiman.
5. Kementerian Sekretariat RI. 2008. Undang-Undang Nomor 18 Tahun 2008 tentang Pengelolaan Sampah
6. Kementerian Sekretariat RI. 2012. Peraturan Pemerintah Republik Indonesia No. 81 Tahun 2012 Tentang Pengelolaan Sampah Rumah Tangga dan Sampah Sejenis Sampah Rumah Tangga.
7. Notoadmodjo. S. 2010. Promosi Kesehatan Teori dan Aplikasi. Jakarta : Edisi Revisi 2010 Jakarta : Rineka Cipta
8. Notoadmodjo. S. 2012. Promosi Kesehatan dan Perilaku Kesehatan. Edisi Revisi 2012. Jakarta : Rineka Cipta.
9. Notoatmodjo S. 1996. Ilmu Kesehatan Masyarakat. Jakarta : Rineka Cipta

10. Qanun Kabupaten Aceh Barat no 4 Tahun 2017 Tentang Pengelolaan Sampah
11. Rahmawati, Reni. 2016. Faktor-Faktor yang berhubungan dengan penerapan 3 R (Reduce, Reuse, Recycle) Pada Sampah Rumah Tangga Di Kecamatan Rengat Barat Kabupaten Indragiri Hulu Propinsi Riau Tahun 2016. Padang : Skripsi Sarjana Universitas Andalas
Online document
12. <http://portalsatu.com/read/news/dlh-akui-belum-maksimal-tangani-sampah-di-aceh-barat-42774>. Diakses Tanggal 23 Maret 2019* Journal names and book titles should be italicized.