Behavioral Analysis of Household Waste Management with ISPA Incidences in Sukowetan Village, Karangan Trenggalek Regency

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ABSTRACT

Acute Respiratory Infection (ARI) lasts for 14 days and is a respiratory infection caused by a virus or bacteria. The purpose of this study was to determine the effect of household waste management behavior on the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency.

This study used a cross sectional design. The population is all 155 houses in Sukowetan Village, Karangan District, Trenggalek Regency. The sample is 112 houses using simple random sampling technique. The independent variable is the behavior of household waste management, while the dependent variable is the incidence of ARI. The results of this study were analyzed by logistic regression.

The results of this study showed that most of the respondents had household waste management behavior with less category as many as 87 respondents (86.6%). Almost half of the respondents did not experience the incidence of ARI, as many as 99 respondents (88.4%). There is a relationship between household waste management behavior and the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency (p value 0.003 <0.05).

If the household waste management is better, the lower the incidence of ARI will be. The community should manage waste in a good and correct way so that it can reduce the incidence of ARI.

Keywords : Behavior, Waste Management, ISPA Incidence

INTRODUCTION

The Indonesian Ministry of Health stated that "Acute Respiratory Infections (ARI) last for 14 days and are respiratory tract infections caused by viruses or bacteria. In Indonesia, ARI (Acute Respiratory Infection) is the main infectious disease that causes death. According to a survey conducted by the ARI sub-directorate placing ARI as the main cause of death with a percentage of 22.30%.

According to WHO 2011 data, it is shown that ARI is the third deadliest disease in the world after non-communicable diseases (PTM) with the number of ARI sufferers of 3.46 million people. in 2019 as many as 281,628 reports. For East Java, the incidence of ARI (Acute Respiratory Infection) is 5.99% (Riskesdas, 2018). Trenggalek Regency based on health profile data on ARI incidence of 1,527 patients (Health Profile of Trenggalek Regency Health Office, 2017). In the area of UPTD Puskesmas Karangan, ISPA incidents were 1,558 patients (Health Profile of the Trenggalek District Health Office, 2019). Sukowetan Village based on data on the health profile of ARI disease is the 3rd highest disease with the incidence of ARI in 2017 of 132 patients, in 2018 of 110 sufferers, in 2019 the incidence of ARI was 155 patients (Health Profile of Pustu Desa Sukowetan, 2019).

Factors that affect ARI are internal factors and external factors. Internal factor is a condition in the patient that makes it easy to be exposed to ARI agents, which include gender and age. External factors of a situation outside the patient include the physical,

biological, social and economic environment that makes it easier for the patient to be exposed to germs (agents) including: household waste management behavior, cigarette smoke, kitchen smoke (cooking with a stove), geographical conditions, and ventilation. and lighting (Dwi Gayatri, 2016).

Household waste is a serious problem in densely populated residential areas. In rural areas, the most common household waste management is by burning (64.1%) because the land in the countryside is quite large (Nirwono, 2013). This condition is in accordance with the theory which says that the higher the income and level of household expenditure, the higher the percentage of households that manage waste by burning (Ministry of Health, 2015).

Most of the people in the area throw their household waste on vacant land. Furthermore, the waste is processed by burning, the distance between the disposal site and the residents' houses is about 6-10 meters. Smoke from burning household waste often enters the house, causing health problems for the residents. As a solution to this problem, efforts are needed to reduce the incidence of ARI. The purpose of this study was to analyze the behavior of household waste management with the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency.

METHODS

This research was conducted in Sukowetan Village, Karangan District, Trenggalek Regency. The research method uses correlational type and cross sectional data collection with a sampling technique that is simple random sampling in order to obtain a total sample of 112 respondents. The data processing technique used is logistic regression analysis.

RESULTS

Characteristics of Respondents

Table 1. Characteristics of respondents in this study include age, gender, education history, occupation.

No.	Karakteristik	ΣN	Σ%
1.	**Umur (tahun)**		
	20-35	39	35
	< 35	73	65
2.	**Jenis Kelamin**		
	Laki-laki	41	37
	Perempuan	71	63
3.	**Riwayat Pendidikan**		
	Tamat SD	13	12
	Tamat SMP	30	27
	Tamat SMA	61	54
	Perguruan Tinggi	8	7
4.	**Pekerjaan**		
	Ibu Rumah Tangga	50	45
	Petani	29	26
	Swasta	32	28
	PNS	1	1

STATISTICS TEST RESULTS

Table 2. Results of statistical analysis of the influence between household waste management behavior and the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency (01 February – 11 February 2021).

Variabel	Sig	Beta
Perilaku	0,003	32.712
Constan	0,003	52.220

1. In the table above, it is known that the logistic regression test obtained a significant value of the Behavior variable of 0.003 < 0.05, so accepting H1 there is an influence of household waste management behavior on the incidence of ARI.

DISCUSSION

A. Household Waste Management Behavior.

The results showed that most of the respondents had household waste management behavior in the less category as many as 87 respondents (86.6%). While a number of 25 respondents (13.4%) had household waste management behavior in the sufficient category. Garbage is closely related to public health, because from the garbage will live various disease-causing microorganisms (pathogenic bacteria), and also insects as disease spreaders (Notoatmodjo, 2011). The rate of waste production continues to increase, not only in line with the rate of population growth but also in line with the increasing consumption patterns of the people. On the other hand, the capacity of the community and local government to handle waste has not been optimal. Waste that is not managed properly will affect the environment and the health of the surrounding community.

According to researchers, household waste management behavior is influenced by several factors such as lack of public knowledge about good and correct household waste management, bad community habits in managing household waste, lack of thinking to manage household waste that meets the requirements, motivation from people who considered as a reference in managing household waste, lacking support from household members, as well as the surrounding environment, facilities for waste management that do not support such as the existence of TPS.

Based on the results of the study, it was found that most of the respondents had poor household waste management behavior because the majority of household members disposed of waste improperly, the majority of household members did not sort waste between organic and inorganic waste, the majority of household members did not distinguish wet waste and waste. dry, the majority of household members throw garbage behind the house but the garbage collection is open, the majority of household waste is burned, the majority of the waste is not recycled for fertilizer and the waste is not disposed of to the TPS because the village does not have a TPS. Waste management behavior like this of course still does not meet health requirements.

B. Incidence Rate of ARI (Acute Respiratory Infection).

The results showed that almost half of the respondents did not experience the incidence of ARI as many as 99 respondents (88.4%). While a number of 13 respondents (11.6%) experienced the incidence of ARI. ARI is an acute respiratory tract disease which includes the upper respiratory tract such as rhinitis, pharyngitis, and otitis as well as the lower respiratory tract such as laryngitis, bronchitis, bronchiolitis, and pneumonia which can last for 14 days. A time limit of 14 days was taken to determine the acute limit of the disease. The respiratory tract is an organ from the nose to the alveoli along with organs such as the sinuses, middle ear space and pleura (Malinda et al., 2019).

Acute Respiratory Infection (ARI) is a major cause of morbidity and mortality of infectious diseases in the world. Nearly four million people die from ARI every year (WHO, 2012). ARI is one of the health problems in developing and developed countries. This is because the morbidity and mortality rates are still high due to ARI.

According to researchers, a person can easily experience a certain disorder or disease, because it depends on the condition of the air quality of the environment whether it is polluted or not. The occurrence of fever accompanied by a cold cough is the result of less than ideal environmental conditions where the air quality is not good and also the humidity is bad so that a person is easy to experience health problems, especially respiratory disorders. Therefore, parents must maintain their immunity so they are not easily exposed to ARI by providing food with balanced nutrition, besides that the community must also maintain environmental conditions, especially the quality of the air to keep it safe and healthy.

C. The Relationship of Household Waste Management Behavior to the Incidence Rate of ARI.

Based on the results of the Logistics Regression analysis, it shows that the p-value is $0.003 < 0.05$, so H0 is rejected and H1 is accepted, so it can be concluded that there is an influence of household waste management behavior on the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency.

According to Yusup and Sulistyorini (2015), waste management/sanitation behavior that does not meet health requirements can be a good environment for the proliferation of ARI bacteria and the transmission of ARI disease. Environmental hygiene that is not cleaned regularly can cause dust and unpleasant odors.

According to researchers, most of the respondents who experienced ARI and their behavior in waste management were lacking, because all household members in managing waste were burned, they did not differentiate between wet and dry waste, organic and inorganic waste and never recycle waste for fertilizer. It is also known that there is one respondent with sufficient waste management behavior but has ARI, due to age, has a history of ARI disease and the possibility that all household members only burn garbage occasionally. Thus, it can be concluded that there is sufficient influence between household waste management behavior and the incidence of ARI, because the better the behavior of household waste management, the lower the incidence of ARI and vice versa if the management of household waste is lacking, the incidence of ARI will increase.

CONCLUSION

1. Most of the respondents have household waste management behavior in the less category as many as 87 respondents (86.6%).
2. Most of the respondents did not experience the incidence of ARI as many as 99 respondents (88.4%).
3. There is an influence of household waste management behavior on the incidence of ARI in Sukowetan Village, Karangan District, Trenggalek Regency.

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