FACTORS THAT INFLUENCE THE OCCURATION OF ARI DISEASE IN TOLLS IN RANTANG PUSKESMAS, MEDAN CITY

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Abstract

Background: ARI is an acute infection that attacks the respiratory tract, namely body organs starting from the nose to the alveoli along with the adnexa (Romelan, 2006). Acute Respiratory Infection (ARI) is one of the causes of death that is often experienced by children in developing countries. Hypothesis: What are the factors that influence the occurrence of ARI in children under five at the Rantang Health Center, Jalan Rantang No.37, Sei Putih Tengah, Medan City. Research Methods: This research is descriptive analytic with a cross-sectional approach (cross-sectional). This study used a questionnaire which was distributed to each respondent's parents. Summary of Results: The age of children under five who suffer from ARI at the Rantang Public Health Center in Medan is the most aged >2 years - 5 years with the most gender being male. The level of knowledge of the child's parents is less, with an average level of low education, has a low level of information, and has less environmental factors

Keywords*: ARI, Toddler, Inflammation of the Respiratory Tract*

1. INTRODUCTION

We can see air pollution in Indonesia, namely the increasing number of construction of high-rise buildings, monorails, to reduce congestion so that many trees are cut down, motor vehicles are increasing, so that vehicle fumes pollute the air, the amount of deforestation to make luxury residential buildings so that the source of oxygen is reduced, many people throw garbage carelessly, thus polluting the water. All of these things are some of the activities or phenomena that exist in air pollution, where all of these will cause disturbances to human health itself.[1-2]

ARI is an acute infection that attacks the respiratory tract, namely body organs starting from the nose to the alveoli along with the adnexa. Acute Respiratory Infection (ARI) is one of the causes of death that is often experienced by children in developing countries. In Indonesia, ARI is the number one cause of under-five mortality since 2000, the under-five mortality rate due to ARI is 5/1000 under five. The incidence of ARI in children under five in Indonesia is estimated to have an average attack of 3 to 6 times a year.[3,4]

Based on the results of RISKESDAS in 2018 pneumonia cases were found in North Sumatra as many as 5,398 cases with a prevalence of 0.39% while for the Medan area the prevalence of pneumonia sufferers was 3.58% and was the 10 biggest disease problem for toddlers. Based on the Medan Health Profile in 2019, the coverage of ARI findings in children under five was 23.61%.[5,6]

Several factors related to ARI diseases that occur in the community include (a) Public education about hygiene and health, (b) Public knowledge about maintaining health and the environment, (c) Information obtained by the community from health educators about the disease and the causes of the disease in particular. on ARI disease, and (d) The environment around the community is not clean and burns garbage indiscriminately.[7]

2. METHODS

This research is analytical descriptive with a cross-sectional approach (cross-sectional), where the independent and dependent variables are examined at the same time during the study, which aims to determine the factors that influence ARI disease in toddlers at the Rantang Health Center, Jalan Rantang No.37 , Sei Putih Tengah, Medan City. This study used a questionnaire with a sample of 35 people. Sampling of infants with ARI was taken from medical records at the Rantang Health Center. This study uses primary and secondary data. Primary data in the form of data taken from the results of a questionnaire distributed to each parent. While secondary data is data taken from medical records to

see child data in the form of gender, age and diagnosis.

The results of the questionnaires were collected and then data analysis was carried out using a descriptive method which was processed by the SPSS 25 program.

3. RESULTS AND DISCUSSION

The results of the study can be seen based on table 1. The age of children under five who suffer from ARI at the Rantang Health Center in Medan City is mostly at the age of > 2 years - 5 years as many as 24 people (68.6%), the sex of children under five who suffer from ARI at the Rantang Health Center In the city of Medan, the highest number was male as many as 22 people (62.9%), the level of knowledge of parents in children affected by upper respiratory tract infections at the Rantang Health Center in Medan City was the highest level of knowledge of 17 people (48.6%), the factor of parental education in children affected by upper respiratory tract infections at the Rantang Public Health Center in Medan, the most is low education as many as 22 people (62.9%), Parental information factors in children affected Upper respiratory tract infections at the Rantang Public Health Center in Medan, the most is the level of information is less as much as 26 people (74.3%), environmental factors of parents in children who are exposed to respiratory infections. The highest respiratory rate at the Rantang Public Health Center in Medan City is the environmental level of less as much as 15 people (42.9%).

Table 1. Characteristics of study respondents.

Gender	Total	Percentage
Male	22	62,9
Female	13	37,1
Total	35	100,0
Age (years)	Total	Percentage
0 mounth - 1 Year	4	11,4
1 Year - 2 Year	7	20,0
> 2 Year- 5 Year	24	68,6
Total	35	100
Knowledge	Total	Percentage
Good	11	31,4
Enough	7	20,0
not enough	17	48,6
Total	35	100,0
Education	Total	Percentage
High	5	14,3
Intermediate	8	22,9
Low	22	62,9
Total	35	100,0
Information	Total	Percentage
Good	2	5,7
Enough	7	20,0
Not enough	26	74,3
Total	35	100,0
Environmental Factors	Total	Percentage
Good	14	40,0
Enough	6	17,1
Not enough	15	42,9
Total	35	100,0

The results of this study where the age of children affected by upper respiratory tract infections at the Rantang Health Center in Medan city were mostly aged >2 years - 5 years as many as 26 people (70.3%). In accordance with research the highest percentage of ARI sufferers in children aged 2 years to 5 years is 80%, while the lowest percentage is in children aged 2 months to less than 1 year as much as 7.5%. Research in the Jebres Village, Surakarta where the most affected by ARI are children aged 24-36 months, then 37-48 months. While research in the Cadasari Health Center Work Area, Pandeglang Regency in 2019 (Yuliana, 2020) where the most common age affected by ARI is 12-23 months (45.3%).[8,9]

This happens because children aged 2 to 5 years have been exposed to a lot of the external environment and have contact with other ARI sufferers, making it easier for children to suffer from ARI. This is in accordance with the results of research conducted by Suwanjutha (1994) that ages 2 to 5 years have a greater risk of suffering from ARI than children aged 2 months to less than 1 year.

Immunity that is still not perfect and the respiratory tract is still in this stage of development causes immunity at this age to be lower, so that in this age range children become susceptible to infection.10

This is in accordance with the theory which states that age has a large enough influence on the occurrence of ARI. ARI disease in children under five is often caused by respiratory viruses and peaks at the age of 2-3 years. The incidence of ARI in infants and toddlers will provide a clinical picture which is bigger and worse, because ARI in infants and toddlers is generally the first occurrence of infection and has not yet been fully established optimal natural immune process. In addition, the child's immunity is not good and the airway lumen is still narrow. Therefore, the incidence of ARI in infants and children under five will be higher when compared to adults.[11,12]

The results of this study were based on the sex of the children affected by upper respiratory tract infections at the Rantang Public Health Center in Medan, the majority were male as many as 22 people (59.5%). In accordance with previous research the highest percentage of ARI sufferers in children under five with male sex is 70%, while the lowest percentage is in children under five with female sex as much as 30%. While research Children under five who are often exposed to ARI are male.[13,14]

Boys prefer to play in dirty, dusty places, and play a lot outside the house, so that they come into contact with other ARI sufferers which facilitates transmission and the child is exposed to ARI. This is in accordance with previous research, that the incidence of ARI is more common in boys than girls. Boys are more susceptible to ARI than girls. This is in accordance with the theory which states that boys have a higher risk than girls of ARI, because children Boys often play outside the house so that they are exposed to more air than girls who play more dominantly in the house in the house.[11]

Meanwhile, based on research conducted by Mutalazimah (2015) regarding the physical environment and internal factors with the incidence of ARI in the city of Bandung said that boys are more susceptible to ARI because boys are more active in activities so they are easy to get tired and tend to have a decreased immune system. , compared to children woman.[14,15]

Based on the level of knowledge of parents in this study where the level of knowledge of parents in children affected by upper respiratory tract infections at the Rantang Health Center in Medan City the highest level of knowledge was 19 people (51.4%). This is in line with research (Nurwahidah, 2019) where the level of knowledge of parents about the incidence of ARI at the Kumbe Health Center in Bima City is the most with a level of knowledge of less than 50%. Based on the results of the study, it shows that most parents of toddlers have less influence and only a small number of parents of toddlers have good knowledge about ARI. This is because there are still many parents of children under five with low education and lack of information about ARI, the relationship between parental knowledge about coping in the incidence of ARI. The level of knowledge is very important for someone to have, because the level of knowledge is an insight that will cause changes in a person's attitude and action in overcoming problems that arise in life. The results of this study are in line with research by Ariyanto, Y (2008) that the impact of knowledge on the incidence of ARI in toddlers is quite large, which means that if parents' knowledge of risk factors for ARI is increased, the incidence of ARI in toddlers will be reduced.[16]

The results of this study where the education factor of parents in children affected by upper respiratory tract infections at the Rantang Health Center in Medan City is the most low education as many as 24 people (64.9%). In accordance with research in the Sentosa Baru Health Center area of Medan where the most affected children are parents with low education, from 60 community respondents who have higher education there are 20 people (33.3%) where the majority do not have ARI, which is 17 people. (28.3%) and the minority experienced ARI as many as 3 people (5%). There are 19 people who have secondary education (31.7%) of which the majority do not have ARI, namely 13 people (21.7%) and the minority has ARI, which is 6 people (10%). This shows that a person's education is related to the occurrence of ARI where the level or level of education is a continuous education stage, which is determined based on the level of development of students, the level of complexity of teaching materials and the way in which teaching materials are presented. A person's level of education will determine the mindset and insight, besides that the level of education is also part of work experience. The higher a person's education, it is expected that knowledge and skills will increase. Through education, humans are considered to gain knowledge and the higher the education, the higher the quality.[17,18]

The results of this study are relevant to Kusno's 2013 research (in Ade 2019), which states that mothers with low education will tend not to know how to provide good care and take the right medicine for their children who suffer from ARI. Factors that affect knowledge of health is the level of education, people who have good educational abilities have good education have the ability to absorb and understand the knowledge they receive.[18]

The results of the parental information factor in children affected by upper respiratory tract

infections at the Rantang Public Health Center in Medan, the most is the lack of information as many as 28 people (75.7%), according to Ade 2019's research, where the information level of mothers who bring their children for treatment due to ARI in the area of the Puskesmas Sentosa Baru Medan is in the bad category. Information is data that has been shaped into a form that is useful and usable for humans. Murdick said that information consists of data that has been obtained, processed / processed, or otherwise used for the purpose of explanation / explanation, description, or as a basis for making predictions or decision making. Knowledge can be obtained from experience that comes from various sources of information so that it can form a belief for someone. One of the factors that affect a person's knowledge is information or counseling from competent people such as midwives, cadres and other health workers.[19]

Ade's research 2019, sources of information are very important to obtain information about health, one of which is the prevention of ARI. There are some respondents who still lack sources of information about ARIs because they are lazy to read, and they are not able to find out information about health, even though access to information about ARIs is very much. both from books, the internet and even on television. Therefore, it is necessary to increase the interest in reading all about health, especially about ARI in order to avoid disease.[11.19]

The results of parental environmental factors in children affected by upper respiratory tract infections at the Rantang Health Center in Medan City were the highest environmental level of 16 people (43.2%). Environmental conditions can affect public health conditions. Many aspects of human well-being are influenced by the environment and many diseases can be initiated, supported, sustained, or stimulated by environmental factors. The environment consists of the physical and non-physical environment. In general, the physical environment consists of geographical conditions, humidity, temperature, and living environment. The non-physical environment includes social (education, work), culture (customs, hereditary habits), economics (micro and local policies), and politics. A good environment is not necessarily without ARI disease. This can be seen from the people of Medan Perjuangan Sub-district who are around the working area of the Sentosa Baru Health Center, which on average have a good environment but still suffer from ARI disease.[17]

According to Notoatmodjo (2003) the environment is everything that is around the individual, both the physical, biological, and social environment. The environment affects the process of entering knowledge into individuals who are in that environment. This happens because there is a reciprocal interaction or not which will be responded to as knowledge by each individual.[19]

Family members who smoke are the main factor that is often the main indicator in the cause of ARI disease in the community, this is shown from the survey results as many as 51 respondents stated that out of 60 respondents studied or comparable to 85%. The demographic location of the house where you live close to the road is another environmental factor that is the main indicator in the incidence of ARI.[18,19]

4. CONCLUSION

The age of children under five who suffer from ARI at the Rantang Public Health Center in Medan is the most aged >2 years - 5 years with the most gender being male. The level of knowledge of the child's parents is less, with an average level of low education, has a low level of information, and has less environmental factors.

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