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RELATIONSHIP BETWEEN THE PROVISION OF COMPLETE BASIC IMMUNIZATION AND THE INCIDENCE OF ISPA DISEASE IN TODDLERS

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ABSTRACT

Acute respiratory infections are very easily transmitted through droplets coming out of the lives and mouths of people with ARI or through direct contact, namely by contamination of hands or respiratory aerosols in close infectious distance. Handling ARI, if not handled properly, even if it is late, can attack the lungs and result in death in children. One of the risk factors for ARI in terms of individual factors is immunization status. Toddlers with complete immunization are expected to not become severe if they get ARI, the disease that is being suffered by the toddler. This study used a cross-sectional analytic survey method. All research variables, namely the independent variable and the dependent variable, were observed at the same time. Sampling used the total population. This study involved 139 respondents. The research was conducted at PMB Ririn Sevda Korini, Ogan Komering Ulu Regency. The statistical test results showed that there was a significant relationship between the provision of complete basic immunization and the incidence of ARI disease (p value = 0.001). It is hoped that the families of people with ARI and the community will participate in overcoming ARI disease in toddlers, including in providing complete immunization, but immunization alone cannot prevent the entry of disease seeds; therefore, parents must pay attention to their children because toddlers are an age prone to disease and infection.

Keywords: ARI, Immunization, Toddlers

1. INTRODUCTION

Acute respiratory infections, often known as ARI, are acute inflammations of the upper and lower respiratory tract caused by bacterial, viral, or fungal infections and are contagious. Handling ARI, if not handled properly, even if it is late, can attack the lungs and result in death in children(1). Acute respiratory infections are very easily transmitted through droplets coming out of the lives and mouths of people with ARI or through direct contact, namely by contamination of hands or respiratory aerosols in close infectious distance(2).

According to the World Health Organization (WHO), ARI is the most common disease causing death in children under five. ARI still causes a high number of deaths, mostly due to pneumonia. ARI is also the main cause of patient visits to health facilities, occupying 40%–60% of clinic visits and 15%–30% of health center visits as a group of diseases. Coughs, runny noses, and breathing problems are the most common symptoms. Environmental factors, individual child factors, and behavioral factors are the precipitating factors for ARI(3). ARI, based on the 2018 Riskesdas National Report, is highest in Bengkulu Province at 14%; the lowest is in Bangka Belitung Province at 2.1%; and South Sumatra Province has a value of 5.5% for ARI sufferers in toddlers(4). ARI data based on the Central Bureau of Statistics of South Sumatra Province in 2019 is 49,158 cases, in 2020 25,366 cases, and in 2021 32,336 cases (5). The number of cases of ARI disease in OKU Regency in 2019 was 12,027, and in 2020 it was 8,567. (6).

There are two groups in the ARI control program: the first is pneumonia, and the second is non-pneumonia. Non-pneumonia ARIs include cough and cold diseases such as rhinitis, pharyngitis, tonsillitis, and other upper airway diseases(7).

Immunization in toddlers is useful to protect children from infectious diseases. Measles and DPT immunizations are effective immunizations for preventing ARI in toddlers. Toddlers with complete immunization are expected to not become severe if they get ARI, the disease that is being suffered by the toddler(8).

According to research conducted by Wahyuni, F., Mariati, U., and Zuriati, T.S., 2020, children who are not fully immunized are five times more likely to experience ARI than children who are fully immunized(9). Rahayuningrum, D.C., and Nur, S.A., stated in their research that toddlers with incomplete immunization status—as much as 78.2%—tend to experience ARI disease(10). Likewise, research conducted by Haryanti, F.J., Rahmaianti, G., and Fennyria, D.Y. Toddlers with incomplete immunization status have a 7.8 times greater chance of experiencing ARI compared to toddlers who have complete immunization status(11).

Researchers are interested in conducting a study entitled The relationship between the provision of complete basic immunization and the incidence of ARI disease in toddlers at PMB Ririn Sevda Korini, Ogan Komering Ulu Regency.

2. METHOD

This study used a cross-sectional analytic survey method. All research variables, namely the independent variable (provision of basic immunization) and the dependent variable (incidence of ARI disease), were observed at the same time. Sampling used the total population. This study involved 139 respondents. The research was conducted at PMB Ririn Sevda Korini, Ogan Komering Ulu Regency. The study began in January 2023. To determine the frequency distribution, namely univariate analysis, provision of basic immunization, and the incidence of ARI disease, bivariate analysis is used to see the significant relationship between the provision of complete basic immunization and the incidence of ARI disease in toddlers. By using the chi-square statistical test and computerized system with a degree of significance (α) of 0.05 and a 95% confidence level, with a p value ≤ 0.05.

3. RESULTS

1. Incidence of ARI and Provision of Complete Basic Immunization

Table. 1: Frequency distribution based on the incidence of ARI and the provision of complete basic immunization by the Ririn Sevda Korini midwife in OKU Regency in 2023

Variables	n (139)	%(100%)
Incidence of ARI Disease		
Yes	63	45,3
No	76	54,7
Complete Basic Immunization		
Incomplete	68	48,9
Complete	71	51,1

Based on Table. 1, the incidence of ARI disease can be seen in 139 respondents who were affected by ARI disease, as many as 63 people (45.3%) and who were not 76 people (54.7%). The results of providing complete basic immunization can be seen in 139 respondents who received incomplete immunization,

namely 68 people (48.9%) and 71 people (51.1%) who received complete immunization.

2. The relationship between the provision of complete basic immunization and the incidence of ARI disease

Table. 2: The relationship between the provision of complete basic immunization and the incidence of ARI disease at PMB Ririn Sevda Korini OKU Regency in 2023

No	Complete Basic Immunization	Incidence of ARI Disease				Amount		*p value*
		Yes		No				
		f	%	f	%	n	%	
1	Incomplete	42	66,7	26	34,2	68	48,9	
2	Complete	21	33,3	50	65,8	71	51,1	0,001
Total		63	100	76	100	139	100	

Based on Table. 2, it is known that of the 63 respondents who suffered from ARI disease, 42 respondents (66.7%) received incomplete immunization and 21 respondents (33.3%) received complete immunization, and of the 76 respondents who did not suffer from ARI disease, 26 respondents (34.2%) received incomplete immunization and 50 respondents (65.8%) received complete immunization. From the results of the Chi-Square test obtained (p value = 0.001), this indicates that there is a significant relationship between the provision of complete basic immunization and the incidence of ARI disease.

The research that has been conducted is in line with research conducted by Wiwin, Syaiful, and Rasimin, R. In 2020, it was found that there was a significant relationship between basic immunization and the incidence of ARI (p value= 0,008)(8). Wahyuni, F., Mariati, U., and Zuriati, T.S., 2020, in their research, found that there is a meaningful relationship between the completeness of immunization and the incidence of ARI in children aged 12–24 month (p value= 0,002)(9). Research conducted by Rahayuningrum, D.C., and Nur, S.A., in 2021 found that there was a significant relationship between immunization status and the incidence of ARI in toddlers (p value= 0,000)(10). Chandra, Yeni, H., and Inayah, H.K. In 2022, in his research, it was found that there was a significant relationship between immunization status and the incidence of ARI in toddlers (p value= 0,000)(12). Likewise, research conducted by Fadila, F.N., and Siyam, N. In 2022, it was found that there was a significant relationship between children's immunization status and the incidence of ARI in toddlers (p value= 0,000)(13).

Exposure to bacteria or viruses belonging to the genera Streptococcus, Haemophylus, Staphylococcus, and Pneumococcu, as well as various influenza viruses, parainfluenza, and rhinovirus, can result in ARI. The basic immunization program does not directly cause ARI in toddlers, even though its goal is to boost and promote endurance. One of the risk factors for ARI is measles, which typically precedes cases of ARI. This measles disease can be prevented through complete, basic immunization(14).

One of the risk factors for ARI in terms of individual child factors is immunization status. Toddlers who have had measles and survived will have natural immunity to pneumonia as a complication of measles. Most ARI deaths come from types of ARI that develop from immunization-preventable diseases such as diphtheria, pertussis, and measles, so increasing immunization coverage will play a major role in ARI eradication efforts. To reduce ARI mortality, complete immunization is sought. Toddlers who have received complete immunization when suffering

from ARI can expect that the development of the disease will not become severe(15). Complete basic immunization is very useful in increasing immunity in toddlers. The importance of complete immunization is to prevent certain diseases, including ARI, in toddlers. Toddlers who have received complete immunization still suffer from ARI. This is due to the low immune system of the toddler itself; therefore, immunization cannot prevent the entry of disease seeds into the body, but immunization can reduce the level or risk of the development of more severe diseases.

4. CONCLUSION

The research that has been done found that the incidence of ARI disease in 139 respondents affected by ARI disease is 63 (45.3%), and the results of giving complete basic immunization to 139 respondents who get incomplete immunization are 68 (48.9%). From the results of statistical tests, it was found that there was a significant relationship between the provision of complete basic immunization and the incidence of ARI disease (p value= 0,001).

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