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Overview of Public Knowledge About Prevention of Acute Respiratory Infection in Work Area of Mandala Public Health Center Medan

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ABSTRACT

Acute respiratory tract infection (ARI) is an infection of the upper or lower respiratory tract. Causes, tract that can cause mild to severe infections, which are influenced by environmental infections, factors and host factors. The World Health Organization (WHO) reported that ISPA is the Lungs fourth disease with the highest number of deaths in the world. WHO also stated that the Mortality rate due to ISPA reaches 40 per 100,000 deaths. Basic Health Research Report (Riskesdas) in 2018, the number of ISPA cases in Indonesia reached 1,017,290 cases. The five provinces in Indonesia with the highest ISPA cases are East Nusa Tenggara (41.70%), Papua (31.10%), Aceh (30.00%), West Nusa Tenggara (28.30%) and East Java (28.30%).This study aims to determine the description of public knowledge regarding the prevention of ISPA. The data used is a questionnaire. Univariate and bivariate analysis using the chi square statistical test. Chi square test obtained a P value of 0.021, namely (p <0.05) so that it can be stated that H0 is rejected while H1 is accepted which indicates that there is a significant relationship between the level of knowledge of respiratory tract infections and in the Spearman test, a sig correlation (2 tailed) of 0.006 was obtained, namely (p <0.05) which means that there is a significant correlation between the two variables being tested.

Keywords: Public Knowledge, Prevention of Acute, Respiratory Infection

1. INTRODUCTION

Acute Respiratory Infection (ARI) is an infection of the respiratory tract, both upper and lower respiratory tract, and can cause a wide spectrum of diseases from mild infections to severe and fatal diseases, which are influenced by the causative pathogen, environmental factors, and host factors. This disease can attack the respiratory tract from the nose to the alveoli including the adnexa (sinuses, middle ear cavity, pleura). This disease is caused by bacteria or viruses that enter the respiratory tract and cause an inflammatory reaction. The World Health Organization (WHO) reports that ARI is the fourth disease with the highest number of deaths in the world. WHO also states that the mortality rate due to ARI reaches 40 per 100,000 deaths. In Indonesia, ARI is a common disease suffered by people of various age groups. Based on the 2018 Basic Health Research (Riskesdas) report, the number of ARI cases in Indonesia reached 1,017,290 cases. This number has increased significantly when compared to the number of ARI sufferers reported in the 2013 Riskesdas report.

Acute Respiratory Infection (ARI) is a significant global health issue, affecting millions of people each year. According to the World Health Organization (WHO), ARI is responsible for one-third of deaths in children under five years old worldwide (WHO, 2020). This disease can be caused by various factors, including viral and bacterial infections, as well as poor environmental conditions (Sari et al., 2021). Effective prevention efforts

are crucial to reducing the disease burden, especially in developing countries like Indonesia, where access to healthcare services is often limited (Wahyuni & Rahmawati, 2022).

2. METHOD

This research is descriptive analytical with a cross-sectional approach. The data measured is knowledge of ARI prevention. This research was conducted at the Mandala Community Health Center, Jalan Cucak Rawa, Tegal Sari Mandala II, Medan Denai, Medan City, North Sumatra. The research period began on February 5 - May 24, 2025. The population in this study were ARI patients with 150 respondents.The sampling method used in this study was simple random sampling. The technique used was Notoatmodjo's (2015) approach. The sampling method used in this study was simple random sampling, using the following formula:

$$n = \frac{N}{1 + N\,(d^2)}$$

Description: N: Research Population
S: Research Sample
D: Error level used

$$n = \frac{150}{1+150\ (0.1)\ X\ (0.1)}$$

$$= \frac{150}{1+1.5}$$

= 60 people

The data obtained will be analyzed using the Statistical Package for Social Sciences (SPSS). Univariate data analysis was used to determine the knowledge of the Mandala Community Health Center community.

3. RESULTS AND DISCUSSION

The respondents in this study were the community at the Mandala Community Health Center. The total number of respondents was 60. Simple random sampling was used for sampling. Respondents met the inclusion and exclusion criteria.

Table 1. Respondent Characteristics Based on Age

Category	Frequency	Percentage (%)
30-35 Years	22	36.7%
36-40 Years	11	18.3%
41-45 Years	18	30%
46-50 Years	7	11.7%
51-55 Years	2	3.3%
56-60 Years	0	0%
Total	60	100%

Based on table 1, it can be seen that the number of respondents in the 30-35 years age category occupies the largest number, namely 22 respondents (36.7%), then with the 36-40 years category having the number of respondents amounting to 11 people (18.3%), then with the 41-45 years category having the number of respondents amounting to 18 people (30%), with the 46-50 years category having the number of respondents amounting to 7 people (11.7%), while for the age category with the least number of respondents is in the 51-

55 years category, namely 2 respondents (3.3%). For the 56-60 years age category there are no respondents at all.

Table 2. Respondent Characteristics Based on Gender

Category	Frequency	Percentage (%)
Man	37	61.7%
Woman	23	38.3%
Total	60	100%

Based on table 2, it can be seen that this study had the largest number of respondents, namely male respondents with a total of 37 respondents (61.7%), while female respondents only had a total of 23 respondents (38.3%).

Table 3. Respondent Characteristics Based on Last Education

Category	Frequency	Percentage (%)
JUNIOR HIGH SCHOOL	9	15%
SENIOR HIGH SCHOOL	22	36.7%
S1	23	38.3%
S2	6	10%
Total	60	100%

Based on table 3, it can be seen that respondents with the highest level of education of junior high school have a total of 9 respondents (15%), with the highest level of education of high school have a total of 22 respondents (36.7%), with the highest level of education of bachelor's degree have a total of 23 respondents (38.7%), and with the highest level of education of master's degree have a total of 6 respondents (10%). Based on this, it can be concluded that in this study there are many respondents with their highest level of education at the bachelor's level.

Table 4. Respondent Characteristics Based on Level of Knowledge of ISPA

Category	Frequency	Percentage (%)
Not enough	29	48.3%
Enough	19	31.7%
Good	12	20%
Total	60	100%

Based on table 4, it can be seen that there are 29 respondents (48.3%) with the category of poor knowledge on ISPA, there are 19 respondents (31.7%) with the category of sufficient knowledge on ISPA, and there are only 12 respondents (20%) with the category of good knowledge on ISPA. Based on this, it can be concluded that in this study the largest number of respondents is at the level of poor knowledge on ISPA and where the respondents who have a good level of knowledge on ISPA have a smaller number than respondents who have poor knowledge on ISPA.

DISCUSSION

Knowledge is closely related to education. It is hoped that people with higher education will further expand their knowledge, but in people with lower education, this does not mean they cannot have the same knowledge, but there are efforts to increase promotion and prevention of ISPA diseases in the community. The data obtained from the results of research conducted using a sample of 60 respondents, data obtained directly from filling out questionnaires by the community who came for treatment to the Mandala Community Health Center UPT, Medan City in February 2025.In this study, knowledge was measured using a questionnaire adopted from Ramadhan Yudha Yuliyanto's study on the Overview of Knowledge of Students of the Faculty of Medicine, Maranatha Christian University Regarding ISPA.

The results from the respondents as a whole show that the level of knowledge of the community at the Mandala Health Center UPTThe 30-35 age group had the largest number of respondents, with 22 respondents (36.7%), followed by the 51-55 age group with the smallest number of respondents, with 2 respondents (3.3%).

The 56-60 age group had no respondents at all. The largest number of respondents were male respondents, with 37 respondents, while female respondents only had 23 respondents.

In this study, it can be concluded that in this study, good knowledge with their last level of education, namely at the S1 level, can be seen that there are 29 respondents in the category of poor knowledge on ISPA, there are 19 respondents with the category of sufficient knowledge on ISPA, and there are only 12 respondents with the category of good knowledge on ISPA.

This research is in line with research conducted by Mini Harianti in 2023 regarding the description of the Relationship between the Level of Parental Knowledge and the Incidence of ARI in Toddlers in the Simpang Tiga Community Health Center Work Area. Mothers' knowledge and attitudes about ARI disorders and treatment are the most important elements in forming good habits for improving children's health. Knowledge

4. CONCLUSION

Based on the data and results obtained from the research on the Overview of Public Knowledge of the Mandala Health Center UPT Regarding the Prevention of Acute Respiratory Tract Infections, it can be concluded that the Level ofCommunity Knowledge the Mandala Community Health Center UPT has insufficient knowledge regarding the prevention of ISPA. The public is expected to raise awareness of the importance of maintaining environmental cleanliness and maintaining family health. Specifically, they should seek information about acute respiratory infections (ARI), including prevention and transmission. The Head of the Mandala Health Center is expected to increase health education and promotion related to ISPA. Suggestions for further researchers are expected to use other variables that have not been studied by researchers, such as those that can measure the relationship between knowledge, attitudes and behavior regarding the prevention of ISPA.

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