

## The Relationship of Maternal Knowledge and Attitudes towards Acute Respiratory Infection Disease (ARI) in Likino Village, Hom-Hom Health Center Working Area JAYAWIJAYA REGENCY

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### ABSTRACT

Acute Respiratory Infections (ARI) are one of the most frequent causes of death in children especially in developing countries, the disease is mostly caused by viruses. ARI is the cause of four out of 15 million deaths in children under the age of 5 each year and as many as two-thirds of those deaths occur in infants. The number of ARI sufferers in Papua Province in 2019 was recorded at 285,793 cases and the results of a survey at the Hom-Hom Health Center in 2019 showed the number of ARI cases was 769 people, including 16.4% aged less than 1 year and 15.1% aged 1-4 years. Seeing the high incidence of ARI, public health efforts are needed in preventing ARI. Health efforts that have been carried out are in the form of health counseling, supplementary feeding, and immunization of DPT and measles, as well as treatment. Based on the description above, the researcher raised "The Relationship between Knowledge and Maternal Attitudes towards ARI Disease in Likino Village, Hom-Hom Health Center Working Area, Jayawijaya Regency. This research is a quantitative descriptive research with a cross-sectional approach. The size of the sample is based on the non-random quota sampling method, then the quota or sample allotment is determined as many as 30 respondents. The results of the study obtained that mothers who have good knowledge have the potential for children to suffer from ARI by 10%, mothers who have sufficient knowledge have the potential for children to suffer from ARI by 35%, and mothers who have less knowledge have the potential for children to suffer from ARI by 55%. Based on the attitude obtained by mothers with a positive attitude, the potential for children to suffer from ARI is 20% and mothers who have a negative attitude have the potential for children to suffer from ARI by 80%. The results of data analysis with the Chi-Square statistical test showed that the significance value of sig (2-tailed)  $0.025 < 0.05$  for knowledge and attitudes which means that there is a strong relationship between knowledge and maternal attitudes towards the incidence of ARI Disease.

### Keywords

Knowledge, Attitudes, Acute Respiratory Infection (ARI).

### Background

Acute Respiratory Infections (ARI) are one of the infectious diseases caused by viruses. According to the World Health Organization (WHO), ARI is one of the most frequent causes of death in children, especially in country, which is developing. These

acute respiratory infections cause four out of 15 million deaths in children under the age of 5 each year, and as many as two-thirds of those deaths occur in infants. Each child is estimated to have 3-6 episodes of ARI. Every year 40-60% of visits at Public Health Centre, (Puskesmas) are people with ARI disease. The proportion of all deaths of toddlers caused by ARI reaches 20-30%. The deaths of ARI were mostly pneumonia. Pneumonia, which was originally an ordinary ARI, because it was not, treated properly, eventually which is caused coughing and difficulty breathing.

According to the Director General of Infectious Disease Eradication and Environmental Health, it is estimated that deaths from pneumonia as the main cause of ARI in Indonesia at the end of 2015 as many as 5 cases among 1,000 babies or toddlers, this shows that as many as 150,000 people each year die from pneumonia. The results of the 2016 Household Health Survey (SKRT) reported that the proportion of infant deaths due to respiratory system diseases was 32.1%, while in toddlers it was 38.8% [1]. The number of ARI sufferers in Papua Province was recorded at 285,793 cases while the total data on ARI cases reported by the Jayawijaya Regency Health Office in 2020 was 2,058 cases. The results of a survey at the Hom-Hom Health Center, Jayawijaya Regency, Papua, were obtained in 2019, the number of ISPA cases was 769 people, while the number of ARI sufferers from January to August 2021 was 258 people.

Seeing the high incidence of ARI, public health efforts are needed in preventing ARI. Health efforts that have been carried out include health counseling on ARI, nutrition, the environment, clean and healthy living behaviors, supplementary feeding in the form of milk, and the provision of DPT and measles immunizations. In addition, treatment efforts are being made for toddlers who have experienced ARI. This is in line with the researcher's view that one of the obstacles in health development is people's knowledge, attitudes, behaviors and habits to live a healthy life. One of the important strategies in efforts to overcome ARI is the active involvement of family members, especially mothers, in early detection, prevention and treatment of ARI disease in toddlers. Maternal involvement plays a very specific role because the mother who first finds out that her child has a disease. Correct maternal knowledge of ARI disease and sufficient knowledge to distinguish mild, moderate, and severe ARI will be of great help in the treatment process. Referring to the background description above, the author is interested in researching the relationship between maternal knowledge and attitudes towards Acute Respiratory Infection (ARI) in Likino Village, Hom-Hom Health Center Working Area, Jayawijaya Regency.

## Method

This research is a *quantitative descriptive* study with a *cross-sectional* approach where researchers collect data to determine how the mother's knowledge and attitudes towards ARI disease. This research was conducted in Likino Village, Hom-Hom Health Center Working Area, Jayawijaya Regency, Papua from November to December 2021. The target population in this study is all housewives in Likino Village, The Working Area of the Hom-Hom Health Center, Jayawijaya Regency, Papua in 2021, is 107 people. The size of the sample in this study was based on the *non-random quota sampling* method, then the quota or sample allotment of 30 respondents was determined using the Slovin formula.

The data collected in this study are primary data, which includes data on the level of maternal knowledge of ARI disease and data on maternal attitudes towards ARI disease. Data processing in this study includes *editing, processing, coding, tabulating, analyzing* and *cleaning* activities. The collected data is then carried out a univariate analysis, namely the data that has been collected is then

grouped and processed with a simple analysis (*descriptive analysis*) of data processing to find out the picture and show the frequency distribution and percentage of each variable studied. Bivariate analysis is used to measure or calculate correlations by involving two free variables, namely the relationship between Maternal Knowledge of ARI Disease, which is carried out with the chi-square test, which is a statistical test, used to test the significance of two variables. Data analysis to determine the relationship between maternal knowledge and attitudes towards ARI disease using a statistical test of *Chi-square correlation* with the degree of meaning or *signification* rate ( $\alpha = 0.05$ ) (data processing in this study was assisted by a computer program).

## Results and Discussion

Distribution of respondents based on the level of knowledge of ARI disease:

**Table 1:** Knowledge Levels of Respondents.

| Level Knowledge | Frecurrence (f) | Percentage (%) |
|-----------------|-----------------|----------------|
| Good            | 6               | 20             |
| Enough          | 12              | 40             |
| Less            | 12              | 40             |
| <b>Sum</b>      | <b>30</b>       | <b>100</b>     |

Based on the table above, most respondents obtained, namely 40% each had a sufficient and insufficient level of knowledge, while respondents with a good level of knowledge of 20%.

Distribution of respondents based on attitudes towards ARI disease:

**Table 2:** Respondents' Attitudes.

| Attitude   | Frecurrence (f) | Percentage (%) |
|------------|-----------------|----------------|
| Positive   | 10              | 33,3           |
| Negative   | 20              | 66,7           |
| <b>Sum</b> | <b>30</b>       | <b>100</b>     |

Based on the table above, 33.3% of mothers who have a positive attitude and 66.7% of mothers who have a negative attitude were obtained.

Distribution of respondents based on ARI disease:

**Table 3:** ARI Disease in Children.

| ARI disease                     | Frecurrence (f) | Percentage (%) |
|---------------------------------|-----------------|----------------|
| Children suffering from ARI     | 20              | 66,7           |
| Children do not suffer from ARI | 10              | 33,3           |
| <b>Sum</b>                      | <b>30</b>       | <b>100</b>     |

Based on the table above, 66.7% of children suffering from ARI and 33.3% of children who did not suffer from ARI were obtained.

The Relationship of Maternal Knowledge Level to ARI Disease

**Table 4:** Relationship of Maternal Knowledge Level to ARI Disease.

| Level Knowledge | ARI disease                 |                                 |   |        | Total |      | p     |
|-----------------|-----------------------------|---------------------------------|---|--------|-------|------|-------|
|                 | Children suffering from ARI | Children do not suffer from ARI |   |        |       |      |       |
| Good            | 2                           | 33,33%                          | 4 | 66,67% | 6     | 100% | 0,025 |
| Enough          | 7                           | 58,33%                          | 5 | 41,67% | 12    | 100% |       |
| Less            | 11                          | 91,67%                          | 1 | 8,33%  | 12    | 100% |       |

Based on the table above, it was obtained that 2 mothers who had a good level of education and children suffering from ARI (33.33%), mothers who had a good level of knowledge and children did not suffer from ARI as many as 6 people (66.67%). There were 7 mothers who had a sufficient level of education and 7 children suffering from ARI (58.33%), 5 mothers who had good knowledge levels and children without ARI (41.67%). Mothers who have less education level and children suffer from ARI as many as 11 people (91.67%), mothers who have less knowledge level and children do not suffer from ARI as many as 1 person (8.33%) Statistical test results obtained a p value of  $0.025 < 0.05$  which means there is a relationship between the level of maternal knowledge of ARI disease in Likino Village, Hom-Hom Health Center Working Area, Jayawijaya Regency.

**Table 5:** Relationship of Maternal Attitudes towards ARI Disease.

| Attitude | ARI disease                 |     |                                 |      | Total |      | P     |
|----------|-----------------------------|-----|---------------------------------|------|-------|------|-------|
|          | Children suffering from ARI |     | Children do not suffer from ARI |      |       |      |       |
| Positive | 4                           | 40% | 6                               | 60%  | 10    | 100% | 0,025 |
| Negative | 16                          | 80% | 4                               | 20 % | 20    | 100% |       |

Based on the table above, it was obtained that 4 mothers who had a positive attitude and children suffered from ARI (40%), mothers who had a positive attitude and children did not suffer from ARI as many as 6 people (60%). There were 16 mothers who had negative attitudes and children suffering from ARI (80%), 4 mothers with negative attitudes and children who did not suffer from ARI (20%). The results of the statistical test obtained a p value of  $0.025 < 0.05$  which means that there is a relationship between the mother's attitude towards ARI disease in Likino Village, The Working Area of the Hom-Hom Health Center, Jayawijaya Regency.

## Discussion

Based on the results of research conducted by researchers, there is a relationship between the level of maternal knowledge of ARI disease, this can be seen from the results of statistical tests with Chi-Square showing the value of knowledge value for ARI Disease as much as 7,368<sup>a</sup> and Asymp. Sig. (2-sided) 0.025. As the basis for decision making if the results of statistical tests with *Chi-Square* show  $p < \alpha 0.05$ , then the null hypothesis is rejected and the alternative hypothesis is accepted, it can be concluded that there is a significant relationship between maternal knowledge of ARI disease. This research is in accordance with a study conducted by Mariaty Darmawan [2] with the title Relationship between The Level of Knowledge and Maternal Attitudes in Exclusive Breastfeeding with the Incidence of ARI in Infants Aged 1-12 months at the Pahandut Palangkaraya Health Center, the results of her research showed that respondents who had good knowledge as much as 14.3% had babies with ARI and 85.7% did not experience ARI.

The knowledge of the people in Likino village about ARI disease is only obtained from health workers when the community is seeking treatment while information on ARI disease through the mass media is only a small number of people who can access it.

In addition, the knowledge of the people in Likino village can also be influenced by beliefs and customs, so that a person's knowledge about ARI disease is closely related.

Menurut Azwar [3] that a person's knowledge is influenced by internal factors and f external actors. With the advancement of technology, there will also be various kinds of mass media, moral beliefs, laws, customs, abilities and habits of evolving in advance of this earth, so that the results of work, karsa and creation and society can influence people's knowledge. Increasing public knowledge can also be through counseling methods.

Based on the results of the research conducted by researchers, there is a relationship between maternal attitudes towards ARI disease, this can be seen from the results of the Chi-Square test between maternal attitudes and ARI Disease, a P Value = 0.028 (P Value < 0.05), so that based on these results, H0 is rejected and Ha / H1 is accepted, namely there is a relationship between maternal attitudes towards ARI disease. This is supported by the results of Pawiliyah's research entitled The Relationship of Maternal Knowledge and Attitudes with the Handling of ARI at Home in Toddlers at the Tumbuan Health Center, that theresearch on maternal attitudes in handling ARI showed that of the 41 mothers who had toddlers who were suffering from ARI at the Tumbuan Health Center in 2018 were 25 mothers with toddlers suffering from ARI (61%) unfavorable attitudes.

Papuans who are already plural because of the mingling of indigenous people and migrants also occur in the village of Likino. This plurality of people raises the level of society in behaving to respond to a disease suffered by family members, causing positive attitudes and negative attitudes in the Likino village community. According to Notoadmodjo [4] in the book Wawan dan Dewi [5], attitudes consist of various levels, namely *receiving*, *merespon* (*responding*), *menghargai* (*valuing*) and *responsible*.

It is this positive and negative attitude in the community of Likino village that can affect how to behave in response to diseases suffered by family members. According to Azwar S the factors that influence attitudes are personal experience, pengaruh of others who are considered important, pengaruh of culture, media of the masses, leducational institutions and religious institutions, and femotional actors.

The relationship between the attitudes of the people of Likino village towards ARI disease is also supported by Susan Susyanti's research [6] with the title The Relationship of Maternal Knowledge and Attitudes with ARI Management in Toddlers in Mekarwangi Village, the results of the hypothesis test with Chi-square stated that there was a meaningful relationship between maternal attitudes and ARI management in toddlers with a p value of 0.014 (< 0.05). This shows that there is a relationship between maternal attitudes and the management of ARI in toddlers.

A mother's attitude in maintaining the health of her child will determine the health or illness of the child, especially a mother is

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more often with her child than her father, so that a mother's support in being positive will greatly determine the generation of the family. Negative mothers' attitudes about maintaining their children's health will cause the morbidity rate to increase, especially ARI disease. Therefore, health workers play a very important role in providing the widest possible information, especially in the group of mothers who have a complex role.

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