



The Experience of the Dani Tribe in the Treatment of ARI in Toddlers at The Sinak Health Center, Puncak Regency

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Abstract

Background: The prevalence of Acute Respiratory Infection (ARI) in Puncak Regency is 8.35% and many people treat ARI with traditional medicine. **Objectives:** This study aims to determine the experience of the Dani family in the treatment of toddler respiratory infections at the Sinak Health Center, Puncak Regency. **Methods:** The method used in this study was qualitative with a phenomenological research approach with informants consisting of 12 residents who had toddlers who were exposed to ARI and who had experience handling ARI in toddlers. **Result:** The results of the study found that traditional medicine was the first treatment for participants when their toddler suddenly got sick, by rubbing eucalyptus oil or taking it to a masseuse. If the traditional treatment doesn't work, then the family takes the toddler for treatment to the Public Health Center to get medicine from a health worker.

Keywords: ARI; Toddler; Traditional.

1. Introduction

Acute respiratory infection (ARI) is the main cause of morbidity and mortality due to infectious diseases in the world.

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About 4 million babies die every year due to acute respiratory infections, of which 98% of deaths are pneumonia, bronchitis and bronchiolitis. Very high mortality rates occur in infants under the age of 5 years, especially in low- and middle-income countries. Acute respiratory infection is one of the most common diseases found in health care facilities, especially in child health services [1]. ARI is an infection that affects the upper respiratory tract as well as all portions of the lower respiratory tract (alveoli), including the sinuses, pleura, and middle ear cavities. This disease has a 14-day development or incubation period, making it an acute infectious disease [2]. ARI symptoms include a fever, a cough lasting less than two weeks, a runny or stuffy nose, and a sore throat [3].

ARI can affect the alveolar tissue in the lungs, causing symptoms such as coughing and shortness of breath. ARI is classified as an acute infectious condition. Bronchopneumonia is a condition in which the bronchus becomes infected while being treated for ARI. ARI is frequently accompanied with organ failure events such as pulmonary edema, arterial hypoxemia, and decreased CO₂ excretion. Furthermore, ARI will attack the host if the host's immune system weakens, and it is well known that toddlers are one of the groups that still have a toddler's immune system, which is prone to many diseases. As a result, it is fairly unusual for children under the age of five to have more ARI since their immune systems are still immature and their respiratory organs have not matured. Toddlers exposed to pathogens are more likely to get ARI [4].

According to the World Health Organization, 13 million children under the age of five die worldwide each year, with the majority of these deaths occurring in developing Asian and African countries such as India (48%), Indonesia (38%), Ethiopia (4, 4%), Pakistan (4.3%), China (3.5%), Sudan (1.5%), and Nepal (0.3%). ARI is one of the leading causes of mortality, killing 4 million of the 13 million children under the age of five each year. Nastiti Kaswandani, head of the Indonesian Pediatrician Association (IDAI) Respiratory Coordinating Work Unit, noted that in 2016, WHO stated that approximately six million children under the age of five perished, with ARI accounting for 16% of these deaths [5].

In Indonesia, ARI is the leading cause of infant mortality and morbidity in children under the age of five. Furthermore, this condition is frequently among the top ten disorders in health institutions, particularly in Public Health Center. According to the 2018 ARI sub-directorate routine report statistics, the incidence of ARI in Indonesia was 20.06% per 1,000 children. Meanwhile, the newborn mortality rate was 0.16% compared to 0.05% in the group of children aged 1-4 years [6].

Various efforts have been made by the government in controlling ARI, starting in 1984 controlling ARI at the global level by WHO [7].

The family is involved in the treatment and care process. The family members took turns monitoring, and they frequently guarded together. While nurses in hospitals are responsible for caring for patients, they must also undertake other jobs in the treatment ward. As a result, the family's participation is critical in monitoring the patient's requirements based on the nurse's report or, if required, making direct communication. This position is more powerful than that of a mother. Some of the roles of mothers in carrying out ARI care efforts for their children include understanding, causes, signs and symptoms, the course of the disease, complications, and how

to treat and care for children during their illness so that they can carry out treatment as soon as possible and already know how to treat it, as well as how to prevent ARI [8].

In Papua Province, the total number of ARI sufferers in 2018 was 24,625. Based on being diagnosed by health workers at 10.51% and based on symptoms that have been experienced by respondents at 13.10% [9]. The prevalence of ARI in Puncak Regency is 821 sufferers, based on being diagnosed by health workers at 8.35%, based on symptoms experienced by respondents at 8.73% [9].

Management of Acute Respiratory Infection (ARI) must be one of the special concerns of the Puncak Regency government, one of which is the Sinak district with a total of 145 sufferers in toddlers spanning January – October [10].

A mother's knowledge can affect whether her child will be sick or well. Many moms are unaware of their children's health issues, especially the prevention and treatment of ARI. This can be based on a mother's level of understanding in safeguarding her infant from contagious and non-infectious diseases [11].

Many people who treat ARI with traditional medicine use traditional ingredients. If the community is not cured, then the community goes for treatment at health facilities such as Public Health Centers or Hospitals.

Based on the researchers' observations, before coming for treatment at the Sinak Health Center they used traditional medicine, namely kimingga leaves which were picked and then boiled, where the steam from the leaves was inhaled for 5-10 minutes and used 3 times a day to treat ARI. Apart from that, there are kunbi-kunbingga leaves which are picked and then put on and then compressed on the forehead for 5-10 minutes to deal with the fever that occurs.

According to statistics on the top ten ailments at the Sinak health center in 2022, the number of ARI patients is 2,544. ARI patients frequently seek therapy at the Public Health Center. The Sinak Health Center is one of the health centers in the Sinak district. The majority of ARI patients at the Sinak Health Center are toddlers. According to data from the Sinak Health Center, there will be 145 toddlers suffering from ARI in 2022. This demonstrates the significant prevalence of ARI among toddlers at Sinak Health Center. Families must understand how to deal with ARI based on this information [10].

Based on the data above, the researcher is interested in examining the experience of the Dani family in the treatment of toddler ARI at the Sinak Health Center, Puncak Regency.

2. Methods

This research on family action analysis in the handling of toddler ARI at the Sinak Health Center in Puncak Regency used a qualitative study with a phenomenological approach (phenomenological research). Phenomenology tries to explore, study, and comprehend a phenomena and its distinctive and unique icon that an individual experiences to the level of the individual's belief in question. The informants in this study consisted of 12 residents who had toddlers who were exposed to ARI and who had experience in treating ARI in toddlers.

In this study, the informants were selected by using the Snowball sampling method. This research was carried out in the Sinak District, Puncak Regency, from November 2022 to January 2023.

Table 1: The characteristics of Informants based on Age, Education, and Occupation.

No.	Initial	Age (years)	Education	Occupation
1.	SR	21	Junior High School	Housewife
2.	BY	34	Elementary School	Housewife
3.	AS	26	Senior High School	Teacher
4.	EK	29	Bachelor	Housewife
5.	DK	29	Senior High School	District staff
6.	EA	26	Elementary School	Housewife
7.	AM	23	Junior High School	Housewife
8.	YK	34	Junior High School	Housewife
9.	AT	35	Elementary School	Farmer
10.	HF	35	Junior High School	Teacher
11.	BK	34	Elementary School	Housewife
12.	RK	27	Junior High School	Housewife

3. Results

Results of interviews with informants (community/families) who have children under five suffering from ARI.

3.1. The experience of the Dani family in the treatment of ARI

Based on the results of interviews with informants about mothers' experiences with the treatment of toddlers affected by ARI. Parents do this by compressing kunbi-kunbingga leaves, the following is an interview excerpt:

SR and HF said that *"Compress using kunbi-kunbingga leaves"*

Informants BY, EK, AS and DK said: *"If the fever doesn't go away for days after compressing it with kunbingga leaves, take it to the health center for treatment"*

Meanwhile, informants EA, AM, YK, AT, BK and RK said: *"Take it to the priest, for treatment with prayers given"*

From the results of the in-depth interviews above, information was obtained that the way to treat toddlers with fever is an act of handling ARI when a child with a fever is compressed using kunbingga leaves. If the situation is still not getting better, then take him to a local health facility such as the Public Health Center.

Informants SR, AM, BY, BK and RK said that: *"Give eucalyptus oil and give it to the whole body so it's warm."*

Informants AS and YK said: *"Drink lots of warm water"*

Informants DK, EA, AT and HF said: *"Given lime mixed with sweet soy sauce"*

From the results of the in-depth interviews above, information was obtained that the informants were identified

as having good actions, this was identified by the information on how to treat coughing toddlers by giving eucalyptus oil all over the body, then giving warm water to drink, and using traditional medicines such as lime juice mixed with sweet soy sauce.

Informants DK, DK, YK, HF, BK and RK said: *"Using kunbingga leaves which are cooked on a fire and then the steam of the leaves is inhaled, but if it doesn't heal take it to the midwife for treatment"*

Informants AS, EA and AT said: *"rubbing eucalyptus oil"*

Meanwhile, informants BY, SR and AM said: *"Come for treatment at the Public Health Center but during the trip to the Public Health Center use traditional medicine to overcome the tightness that is felt"*

Based on the results of interviews with several informants regarding the management of ARI by utilizing traditional medicinal plants commonly used by the Dani tribe, the steps for treating ARI when a child has a fever are compressed using kunbingga leaves and if you feel shortness of breath, the kunbingga leaves are cooked using low heat and then the steam is inhaled, if the situation is still not getting better, then take it to a local health facility such as the Public Health Center. In addition, PHBS is also carried out, such as bathing and washing hands. With the aim of seeing the extent to which the implementation of PHBS in everyday life is carried out by informants so that children can avoid various diseases.

3.2. ARI Treatment

Informants DK, DK, YK, HF, BK and RK said: *"Using kunbingga leaves which are cooked on a fire and then the steam of the leaves is inhaled, but if it doesn't heal take it to the midwife for treatment"*

Informants AS, EA and AT said: *"rubbing eucalyptus oil"*

Meanwhile, informants BY, SR and AM said: *"Come for treatment at the Public Health Center but during the trip to the Public Health Center use traditional medicine to overcome the tightness that is felt"*

According to the informant, those who have an important role in carrying out the management of ARI disease are, such as parents, either father or mother, the informant himself or his family. This shows that in seeking to apply the use of the traditional kunbingga plant which is accompanied by PHBS, one family member invites other family members to run and apply PHBS in everyday life.

3.3. What is the effect of the ARI handling process on toddlers?

Informants SR, AM, BY, BK and RK said that: *"After using kunbingga leaves, the body feels warm and feels good when you breathe."*

Informants AS and YK said: *"What is felt is that the body becomes warm so that it will speed up the healing process"*

Informants DK, EA, AT and HF said: *"After drinking a mixture of lime and soy sauce, the feeling of coughing is reduced."*

From the results of interviews with informants related to ARI, there are changes experienced by the community in the use of traditional kunbingga plants such as the body becomes warm and so it can help in the healing process.

4. Discussion

In general, the dani tribe treats ARI by carrying out traditional medicine using traditional plants around one of the traditional medicinal plants that is often used for the treatment of ARI by the dani tribe, namely kumbingga leaf. Some of the leaves of the kunbingga are cooked in a pot over low heat and then the steam is inhaled for the treatment of coughs and shortness of breath.

The reason the Dani people still practice traditional medicine is because this treatment has been carried out from generation to generation since ancient times, apart from that traditional medicine using kumbingga leaves can treat ARI. In addition, kumbingga leaves are also easy to obtain around the house or in the forest compared to having to go to a local health service that is so far away.

From the results of the research obtained regarding the treatment of toddlers affected by ARI, it is in line with research conducted by Dary (2018) which explained that traditional medicine is the first treatment for participants when a toddler suddenly gets sick, by rubbing eucalyptus oil or taken to a masseuse. If the traditional treatment doesn't work, then the family takes the toddler for treatment to the Public Health Center to get medicine from a health worker [12].

The active role of parents in dealing with ARI is very important. Parents often think that coughing a cold is a disease that is not dangerous, but this disease can become serious if the immune system decreases and is not treated [13]. If a child affected by ARI is left untreated it can result in a wider spread of infection so that the infection attacks the lower respiratory tract and causes pneumonia [14].

What mothers can do at home is to deal with heat (fever) by giving paracetamol tablets or compressing the child using a clean cloth, dipping it in water three times a day. Coping with coughs with safe medicine, namely a traditional concoction made from ½ teaspoon lime mixed with soy sauce or ½ teaspoon honey given three times a day. Giving food that is sufficiently nutritious, a little but repeatedly, that is, more often than usual, especially if vomiting and giving fluids by trying to give fluids (water, fruit water, etc.) more than usual will help thin the phlegm, lack of fluids will increase the child's serious illness.

According to Susanto (2017), appropriate therapy for sufferers necessitates the mother's participation as a method to lessen the impact of health problems on children and their families. Correct awareness of ARI by the mother can assist detect and prevent ARI sooner. Overcoming heat (fever), providing appropriate nutritious food, delivering fluids, offering comfort, and paying attention to warning indications of moderate or severe ARI that require specific care from health personnel are all part of ARI treatment [15].

5. Conclusion

The following conclusion based on the findings of this study:

- a. The people of the Dani tribe in Puncak Regency, in their treatment of ARI in toddlers, still carry out traditional treatment using plants such as turmeric leaves.
- b. The Dani tribe in their search for treatment seeks self-medication at home with traditional medicines such as utilizing the turmeric plant. The part of the kumbingga leaf is often used by the Dani tribe in the treatment of ARI because the leaves of the kumbingga are easy to find and cultivate in the yard and in the forest. The use of kumbingga leaves must be fresh, if there are children under five who are affected by ARI, usually the Dani people look for kumbingga leaves and then process the plant. Some of the kumbingga leaves are cooked in a pan over low heat and then the steam is inhaled for cough treatment. and shortness of breath, whereas if you have a fever, the kumbingga leaves are washed clean and then compressed onto the forehead which is replaced every hour with new kumbingga leaves and the leaves that have been used are thrown away, this is done for several days until healed, if there is no healing then people usually choose health services that are available around their environment.

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