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Education On The Use Of Ginger Honey For Acute Respiratory Infections (ARI)

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Abstract. Acute Respiratory Tract Infection (ARI) is an infectious disease that can affect the human respiratory system. ARI is an infection of the upper respiratory tract caused by microorganisms, including the nasal cavity, pharynx, and larynx, which lack gas exchange (Mustafa et al., 2023). An estimated 13 million people die from ARI. The disease burden varies widely, ranging from approximately 4 million of the 13 million people in India (48%), Indonesia (38%), Ethiopia (4.4%), Pakistan (4.3%), China (3.5%), Sudan (1.5%), and Nepal (0.3%). New ARIs occur in almost every region of the world. In 2022, Southeast Asia had the highest number of ARI cases worldwide. Approximately 30 countries contributed to the number of cases. (WHO, 2022) The incidence of ARI in Indonesia is relatively high, at 166,702 in 2022, reaching 53% of the 50% target. Of the 53% of ARI cases, 31.4% occurred in toddlers. ARI is the second leading cause of death in children under five (12-59 months), accounting for 9.4%. This disease is an acute respiratory infection with symptoms of fever, cough lasting less than two weeks, runny nose/nasal congestion, and/or sore throat (Ministry of Health of the Republic of Indonesia, 2022). In addition to medical treatment, ARI treatment can also be supported by the use of natural ingredients. The combination of ginger and honey has been shown to have a synergistic effect in relieving ARI symptoms. Ginger works to reduce inflammation and help expel mucus, while honey helps soothe irritated airway tissue, reduce coughing, and speed recovery. With the increasing number of ARI cases and the high public reliance on chemical medications, education on the use of ginger and honey is crucial as a safe, economical, and natural alternative that can be administered independently at home. Therefore, this educational activity is expected to increase public understanding of the use of herbal ingredients to support the treatment of mild ARI and encourage healthy lifestyles based on the use of local ingredients.

Keywords: *Utilization, Ginger Honey, ISPA.*

INTRODUCTION

ISPA is an abbreviation for Acute Respiratory Infection, adapted from the English term Acute Respiratory Infection (ARI). ARI, or Acute Respiratory Infection, is an infectious disease that can affect the human respiratory system. ARI is an infection of the upper respiratory tract caused by microorganisms, including the nasal cavity, pharynx, and larynx, which lack gas exchange (Mustafa, et.al., 2023).

ISPA, also known as respiratory tract infection, is an infection that occurs in the upper and lower respiratory tract. It affects people of all ages, from infants and adolescents to adults and the elderly. This is because ARI is highly contagious. Of all age groups, infants are particularly vulnerable to this disease because they do not yet have a stable immune system and are still susceptible to various viruses and bacteria (Ismah, Z, et.al., 2021).

Acute Respiratory Infection (ARI) is the most common cause of death in children under five, and it remains a disease with a high mortality rate, with most deaths caused by pneumonia. As a group of diseases, ARI is also the main cause of patient visits to health facilities, accounting for 40%-60% of visits to community health centers and 15%-30% of visits to hospitals. Common symptoms include coughs, colds, and difficulty breathing. ARI can be divided into two categories: upper and lower ARI. ARI is influenced by several factors, including environmental factors, individual child factors, and behavioral factors. An estimated 13 million people die from ARI. The burden of disease varies widely, ranging from approximately 4 million out of 13 million people to two-thirds of the global total: India (48%), Indonesia (38%), Ethiopia (4.4%), Pakistan (4.3%), China (3.5%), Sudan (1.5%), and Nepal (0.3%). New ARIs occur in almost every part of the world; in 2022, the highest number of ARI cases in the world was in Southeast Asia. Approximately 30 countries contributed to the number of cases. (WHO, 2022).

The incidence of ARI in Indonesia is relatively high, reaching 166,702 in 2022, reaching 53% of the 50% target. Of this 53%, 31.4% of ARI cases occurred in toddlers. ARI is the second leading cause of death in children under five (12-59 months), accounting for 9.4%. This disease is an acute respiratory infection with symptoms of fever, cough lasting less than two weeks, runny nose/nasal congestion, and/or sore throat (Ministry of Health, 2022).

In addition to medical treatment, ARI treatment can also be supported by using natural ingredients that are proven safe and readily available in the environment. One natural ingredient that has long been used and has strong scientific evidence is ginger and honey. Ginger (*Zingiber officinale*) contains active compounds such as gingerol, shogaol, and zingerone, which function as anti-inflammatory, antitussive, expectorant, antibacterial, and antiviral agents, helping to relieve coughs, thin phlegm, and reduce respiratory tract irritation. Meanwhile, honey has natural antimicrobial properties thanks to the glucose oxidase enzyme, which produces hydrogen peroxide, and contains flavonoids and polyphenols, which function as antioxidants and anti-inflammatories. Honey also has a thick texture that provides a soothing (demulcent) effect on the throat, thereby reducing coughing.

The combination of ginger and honey has been shown to have a synergistic effect in relieving symptoms of respiratory infections (ARI). Ginger works to reduce inflammation and help expel mucus, while honey helps soothe irritated airway tissue, reducing coughing, and speeding recovery. With the increasing number of cases of respiratory infections and the public's high dependence on chemical drugs, education on the benefits of ginger and honey is crucial as a safe, economical, and easily home-based natural alternative. Therefore, this educational activity is expected to increase public understanding of the use of herbal ingredients to support the treatment of mild respiratory infections (ARI) and encourage healthy lifestyles based on the use of local ingredients.

RESEARCH METHODS

This outreach and education activity on the use of ginger and honey was held on Wednesday, December 26, 2025, at 9:00 a.m. WIB (Western Indonesian Time) at the Tanjung Kemuning III Village Hall. This outreach and education activity is considered important for the community affected by and at risk of developing ARI.

The series of activities began with a questionnaire administered as a pre-test to assess knowledge about ARI in toddlers. Then, the participants provided information about ARI, including its definition, causes, signs and symptoms, prevention, and treatment. Following the ARI knowledge outreach, the same questionnaire was administered again as a post-test.

In making ginger honey, there are several steps involved, such as preparing the ingredients (1–2 pieces of fresh ginger, 1–2 tablespoons of honey (to taste), 250–300 ml of water, and optionally: lemon, cinnamon, or lemongrass). The cleaning stage (Wash the ginger thoroughly and, if necessary, peel off the dirty outer skin). The ginger processing stage (Boil,

slice or bruise the ginger, boil in 250–300 ml of water for 10–15 minutes, remove from heat, and strain. The honey addition stage (add honey after the water is warm, not while it is still boiling, to maintain the honey's nutrients, then stir thoroughly). The serving stage (Serve while warm to provide a warming effect on the body and comfort for the throat. It can be given in educational activities as an example of a daily herbal drink).

RESULTS AND DISCUSSION

Results

Table 1

No.	Questionnaire	Average Value	Category
1.	Pre-Test Questionnaire	24	Enough
2.	Post-Test Questionnaire	18	Good

Knowledge categories

- 1) Good: presentation results 76% - 100%
- 2) Sufficient: presentation results 56% - 75%
- 3) Less: percentage result >56%

Discussion

A counseling and education activity on the use of ginger and honey was held on Wednesday, December 5, 2025, at 09.00 WIB at the Tanung Kemuning III Village Hall. This activity began with filling out a pre-test questionnaire about ARI, then continued with counseling about ARI, and finally, a post-test questionnaire was given again. The pre-test and post-test questionnaires given during the activity were to determine whether there was an increase in knowledge among mothers with toddlers after participating in counseling about ARI or whether there was actually no increase. In this counseling activity, the community experienced an increase in knowledge from the pre-test with an average of 24 and post-test with an average of 18, with a difference of 6. The use of ginger and honey can be a safe and beneficial complementary therapy to reduce the symptoms of acute respiratory infections (ARI), especially coughing and throat discomfort. The natural anti-inflammatory and antimicrobial effects of ginger and the soothing effects of honey can improve symptoms, but they should not replace medical therapy for severe or complicated infections. Public education should include proper use, limitations, and warning signs that require medical attention. In this activity, the community who participated in this outreach activity were very enthusiastic from the start of the activity until it finished.



Figure 1 Education on the Use of Ginger and Honey for Acute Respiratory Tract Infections (ARI)

CONCLUSION

Acute Respiratory Tract Infection (ARI) is a disease that has recently become increasingly common, especially in toddlers. This ARI is a disease that attacks the human respiratory tract, with symptoms of coughing, runny nose, and fever. In this outreach activity, there was an increase in knowledge from the pre-test with an average of 24 and the post-test with an average of 16, with a difference of 6. In addition to medical treatment, people often use natural ingredients as supportive therapies, one of which is ginger and honey. An educational approach is needed to ensure that the use of these two ingredients is carried out correctly, safely, and does not replace proper medical therapy. In this activity, the elderly who participated in the outreach activity were very enthusiastic from the beginning until the end.

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