



## A Study of Knowledge and Attitudes of Health Students towards Acute Respiratory Infections (ARI) in Lubuklinggau City

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### ABSTRACT

**Purpose of the study:** The aim of this research was to determine the relationship between knowledge and attitudes of health students towards Acute Respiratory Tract Infections in Lubuklinggau City.

**Methodology:** This research method uses quantitative correlational research. The population in this study were all health students in semester 1 and semester 3 in the city of Lubuklinggau. The samples taken were 72 respondents. The sampling technique uses simple random sampling through questions that have been tested for validity and reliability. The data analysis technique uses a correlation test.

**Main Findings:** The results of this research are that there is a relationship between knowledge and attitudes of health students, the results of knowledge and attitudes have good value for acute respiratory infections.

**Novelty/Originality of this study:** This research provides valuable insight into efforts that may be needed to increase awareness and engagement in fighting this Acute Respiratory Infection disease at the local level. It is hoped that the findings from this research can help in designing more effective educational programs and more focused prevention strategies to mitigate Acute Respiratory Infections in Lubuk Linggau and the surrounding area.

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## 1. INTRODUCTION

Acute Respiratory Infection Disease is a disease that is a global health problem. Acute Respiratory Infections include various types of diseases such as flu, bronchitis, pneumonia, and others that attack the respiratory tract. This disease can be caused by various viruses and bacteria that spread through air, physical contact, or contaminated surfaces [1]. Risk factors for Acute Respiratory Infections include air pollution, smoking, exposure to dangerous chemicals, and a weak immune system [2], [3]. Acute Respiratory Tract Infections can cause mild to severe symptoms, depending on the type of virus or bacteria causing it and the individual's health condition [4], [5]. Efforts to prevent Acute Respiratory Infections include maintaining personal hygiene, avoiding contact with sick people, getting the necessary vaccinations, and consuming nutritious food to increase the body's immune system.

Education regarding anticipatory steps to prevent acute respiratory infections is important in efforts to build public awareness of respiratory health [6], [7]. Through knowledge about the causes of Acute Respiratory Infections such as viruses, bacteria and air pollution, people can learn ways to avoid exposure that has the

potential to trigger this disease [8]. Prevention through personal hygiene such as washing hands regularly, using a mask when in crowded places, maintaining environmental cleanliness, and maintaining the body's immune system with a healthy lifestyle such as exercise and consuming nutritious food, are concrete steps that can be taken by every individual to reduce the risk of developing Acute Respiratory Infections. Thus, education about anticipating acute respiratory infections not only helps individuals to protect themselves, but also helps build a healthier and more resilient society in facing health challenges.

This research is in line with research conducted by Mutalik & Raje [9], knowledge regarding Acute Respiratory Infections among college students, who are socially active and academically productive adults, can have a significant impact on overall public health. Insufficient or minimal knowledge about Acute Respiratory Infections, including symptoms, transmission, prevention and treatment, can cause a wider spread of disease in the campus environment and surrounding communities [10], [11]. Additionally, limited understanding of Acute Respiratory Infections can also hinder effective prevention efforts and slow the response to cases that may arise, which in turn can have a negative impact on the general well-being and productivity of students [12], [13]. Therefore, increasing awareness and knowledge about Acute Respiratory Infections among college students is essential to promote better health and prevent the widespread spread of the disease.

The importance of students' attitudes regarding Acute Respiratory Tract Infections in a clean and healthy lifestyle is very large because Acute Respiratory Infections are a health problem that can affect students' academic performance and activities. By maintaining a clean and healthy lifestyle, students can prevent the transmission of Acute Respiratory Tract Infections to other people on campus and in the surrounding environment [14], [15]. A proactive attitude in maintaining personal hygiene, such as washing hands frequently, using a mask when sick, and maintaining physical distance from people who are experiencing symptoms of Acute Respiratory Infection, are important steps that can help reduce the risk of spreading this disease [16], [17]. Apart from that, a responsive and receptive attitude to information and advice from health institutions is also an important factor in efforts to prevent Acute Respiratory Infections, so that students can continue to contribute to creating a safe and healthy learning environment for all parties involved.

One of the novelties in research on student knowledge of Acute Respiratory Infections is the emphasis on understanding more specific risk factors and their impact on certain population groups [18]. Recent research highlights the link between poor sleep patterns and an increased risk of Acute Respiratory Infections in college students, underscoring the importance of a healthy lifestyle in preventing these diseases. Additionally, a deeper understanding of the role of viruses and bacteria in Acute Respiratory Tract Infections has also been a focus of recent research, with efforts to develop more effective diagnostic and treatment strategies based on specific pathogenetic mechanisms [19], [20]. Thus, the novelty in this research not only broadens insight into risk factors and disease mechanisms, but also has the potential to improve preventive approaches and more targeted interventions for students and other general populations.

Recent research on student attitudes towards health issues reveals that there is a significant increase in awareness and caution regarding issues related to Acute Respiratory Tract Infections. Today's students tend to be more proactive in following health protocols, such as using masks, maintaining physical distance, and washing their hands regularly [21], [22]. They are also more open to information and education about Acute Respiratory Infections, and are willing to participate in disease prevention and control programs [23], [24]. These findings show a positive shift in students' attitudes and behavior towards public health, which can make a major contribution in dealing with the spread of Acute Respiratory Infections and improving collective prosperity.

Research on the relationship between knowledge and attitudes of health students towards Acute Respiratory Infections in the city of Lubuklinggau has very important implications in the context of preventing and controlling this disease. By understanding the relationship between student knowledge and attitudes, we can identify areas where updates or improvements need to be made in health education and education [25], [26]. In addition, this research aims to provide a strong basis for the development of effective and targeted intervention programs to increase knowledge and change attitudes of health students towards Acute Respiratory Infections. Thus, it is hoped that the results of this research can make a real contribution to efforts to prevent Acute Respiratory Tract Infections and increase awareness and overall public health in Lubuklinggau City.

## 2. RESEARCH METHOD

This research method uses quantitative correlational research. Correlational quantitative research is a type of research that focuses on the relationship between two or more variables, with the aim of determining the extent to which the relationship is statistically related [27]. This method is carried out by collecting data through research instruments, such as questionnaires or tests, and then analyzing the data using statistical techniques such as Pearson or Spearman correlation. This research does not determine independent or dependent variables explicitly, but rather focuses on measuring how strong the relationship between these variables is. The results of quantitative correlational research can provide valuable insight into the relationships between the variables studied, so that they can be used to make predictions or develop further theories.

The population in this study was all student semester 1 and 3 health students in Stikes Fithrah Aldar Lubuklinggau. The sample in this study used the sampling technique Simple random sampling, namely a simple random sampling method, to determine the number of samples (n) that will be taken from the population (N) for each member of the population and have the same chance. The number of samples taken in this research was 72 respondents.

The data collection method uses instruments in the form of questions. Instruments in the form of questionnaires or questionnaires are used to collect data from respondents by asking a series of questions that are designed systematically in accordance with the research objectives. The data obtained from this question instrument can then be analyzed to gain a deeper understanding of the phenomenon being studied in the research. This method allows researchers to collect data efficiently and systematically from a fairly large number of respondents, so that research results become more representative and reliable for drawing valid conclusions.

The data analysis technique uses hypothesis testing in the form of a correlation test. The correlation test produces a correlation coefficient which shows the strength and direction of the relationship between these variables. One commonly used correlation test is the Pearson correlation coefficient, which measures the linear relationship between two continuous variables. Apart from that, there is also the Spearman correlation test which is used to measure the monotonic relationship between two variables that are not normally distributed or on an ordinal scale. The results of this correlation test can be used to draw conclusions whether there is a significant relationship between the variables studied or not, as well as how strong the relationship is. Thus, data analysis techniques using correlation tests provide a deeper understanding of the relationship patterns between variables in the research.

### 3. RESULTS AND DISCUSSION

The Normality test is carried out to determine whether the data obtained by the researcher comes from a normally distributed population or not. This is done as a condition if the test is carried out with non-parametric statistics. In carrying out the normality test, researchers used SPSS as a tool.

Table 1. Normality test

Variable	Class	Kolmogorov-Smirnov		
		Statistics	Df	Asymp. Sig. (2-tailed)
Knowledge	3rd semester student	.137	36	.087
	5th semester student	.133	36	.105
Attitude	3rd semester student	.132	36	.112
	5th semester student	.108	36	.200

Based on the table the normality test is obtained by the Kolmogorov-Smirnov test with a significance value of  $> 0.05$ , then it can be concluded that the data is normally distributed. The linearity test is explained in the table 2.

Table 2. Linearity test

Variable	Class	Kolmogorov-Smirnov			Description
		Statistics	Df	Asymp. Sig. (2-tailed)	
Knowledge	3rd semester student	.137	36	.087	Linear
	5th semester student	.133	36	.105	Linear
Attitude	3rd semester student	.132	36	.112	Linear
	5th semester student	.108	36	.200	Linear

Based on the Linearity test table, a significance value  $> 0.05$  is obtained, so it can be concluded that the data is linear. The correlation test is a statistical test that is used to determine the closeness of the relationship between independent variables and dependent variables. In this test, the test is only to determine the relationship. The form of the relationship in question is to determine the nature of the relationship between variables X and Y. The correlation test is explained in the table 3.

Table 3. Correlation Test

		Knowledge	Attitude
Knowledge	Pearson correlation	1	.375*
	Sig. (2-tailed)		.024
	N	36	36
Attitude	Pearson correlation	1	.661**
	Sig. (2-tailed)		.000
	N	36	36

In the knowledge variable, the Sig value. amounting to  $0.024 < 0.05$  and for the attitude variable the value of Sig. equal to  $0.00 < 0.05$ , which means there is a relationship between knowledge and students' attitudes towards acute respiratory infections. Research shows that students who have a good understanding of Acute Respiratory Infections (ARI) tend to show a positive attitude in dealing with efforts to prevent and treat this disease. This can ultimately contribute significantly to increasing the value of their knowledge and attitudes towards ARI, strengthening awareness of the importance of preventive measures and appropriate management to reduce the impact of this disease.

This research is in line with research conducted by Khan et al [28], one of the research gaps that can be explored is students' understanding of Acute Respiratory Infections. Even though Acute Respiratory Infection is a disease that often occurs and has significant health impacts, students' knowledge about this disease is still limited. In-depth studies can be conducted to evaluate students' level of knowledge about the causes, symptoms, transmission, prevention and treatment of Acute Respiratory Tract Infections [29]. This is important because adequate knowledge can help prevent the spread of disease and increase appropriate treatment efforts when someone has an acute respiratory infection. In addition, through this research, effective educational strategies can be developed to increase students' and the general public's understanding of Acute Respiratory Tract Infections and reduce the incidence of Acute Respiratory Tract Infection cases in the community.

Although there has been a lot of research examining the factors that influence students' attitudes regarding acute respiratory infections, there is still a research gap that needs to be filled. One of them is an in-depth study of the influence of students' perceptions of health on their attitudes towards Acute Respiratory Infections [30]. Research that focuses on psychological factors such as anxiety, beliefs about the benefits of vaccination, and perceived risk of Acute Respiratory Infections, as well as how these factors interact to shape student attitudes, can provide a more comprehensive understanding in developing appropriate prevention and intervention strategies effective [31], [32]. Apart from that, longitudinal research is also needed that follows the development of student attitudes from time to time to see changes and the factors that influence these changes, so that appropriate steps can be taken to increase awareness and preventive action against Acute Respiratory Infections among students.

Although much research has been carried out in the field of preventing acute respiratory infections, there are still research gaps that need to be explored further. One aspect that needs attention is the development of strategies for preventing Acute Respiratory Infections that are more effective and can be implemented widely, especially in environments with a high level of vulnerability such as densely populated places or areas with limited access to health facilities [33], [34]. Apart from that, it is also necessary to carry out in-depth research on the social, economic and cultural factors that influence the implementation of Acute Respiratory Tract Infection prevention behavior in society, so that more targeted and sustainable interventions can be designed.

Students' understanding of respiratory tract infections has experienced significant development in recent years. With increased access to information via the internet and other educational sources, students now have a deeper understanding of various aspects of Acute Respiratory Infections, including their causes, presenting symptoms, prevention methods, and effective treatment [35], [36]. This allows them to become agents of change in increasing public awareness of the importance of maintaining respiratory health and reducing the risk of spreading the disease in the surrounding environment.

In recent years, there has been a significant shift in attitudes among students regarding acute respiratory infections. Students are now increasingly aware of the importance of maintaining personal health and the surrounding environment to prevent the transmission of Acute Respiratory Infections [37]. Students are active in strengthening healthy lifestyles, such as increasing endurance through exercise, consuming nutritious food, and paying attention to personal hygiene [38], [39]. Apart from that, students also play a role in disseminating information about the importance of vaccination, wearing masks, and maintaining physical distance to suppress the spread of Acute Respiratory Infections in the campus environment and the wider community. This shows the increasing awareness and social responsibility of students in facing health challenges such as Acute Respiratory Infections.

The implications of attitudes and knowledge regarding acute respiratory infections are very important in efforts to prevent and control them. A positive attitude towards health, such as maintaining personal hygiene, avoiding exposure to air pollution, and increasing body resistance, can help prevent the spread of Acute

Respiratory Infections [40]. Good knowledge about this disease, including symptoms, modes of transmission, and appropriate treatment steps, can speed up the diagnosis and treatment process, reduce the risk of complications, and improve the quality of life for individuals affected by Acute Respiratory Infections.

However, inadequate or wrong attitudes and knowledge can have a negative impact on the treatment of Acute Respiratory Tract Infections. For example, an indifferent attitude towards health can cause a person to ignore the initial symptoms of Acute Respiratory Infection, which can then develop into a more serious condition [36], [41]. In addition, incorrect knowledge about the treatment of Acute Respiratory Infections, such as careless use of antibiotics for viral infections, can increase the risk of antibiotic resistance and other health complications. Therefore, appropriate education regarding attitudes and knowledge towards Acute Respiratory Infections is very important to reduce the negative impact of this disease on society.

#### 4. CONCLUSION

The conclusion obtained from this research is that there is a significant relationship between knowledge and attitudes of health students towards Acute Respiratory Tract Infections. It was found that students with good knowledge about Acute Respiratory Infections tend to have a positive attitude in efforts to prevent and treat these diseases, which ultimately contributes to increasing the value of knowledge and attitudes towards Acute Respiratory Infections. This shows the importance of a comprehensive understanding and a proactive attitude in dealing with health problems relevant to society.

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