



## The Influence Of The Habits Of Smokers' Family Members On The Incidence Of ARI In Toddlers In The Working Area Of The Takeran Health Center

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### Info Article

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### Abstract

ARI is an acute infection of the upper and lower respiratory tracts caused by microscopic or bacterial, viral, or rickettsia infections of the body without or accompanied by inflammation of the pulmonary parenchyma. ISPA is also the highest problem in the Takeran sub-district health center. The purpose of this study was to determine the influence of the habits of smokers' family members on the incidence of ARI disease in toddlers in the work area of the Takeran Health Center. This research uses an analytical survey method with a *case-control approach*. The sample of this study was 152 respondents. Data collection was carried out using questionnaire sheets and observation sheets. The data analysis used was univariate, bivariate analysis using the Chi-Square *test*. The results showed that the habit of family members smoking did not affect ARI disease in toddlers with a p-value of 1.000. This study concludes that there is no influence between the habits of family members smoking with the incidence of ispa in toddlers in the Takeran Health Center Work Area. To overcome the problem of ARI, it is necessary to improve nutritional health, immunization, personal or environmental hygiene, and prevent children from coming into contact with people with ARI.

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### Introduction

According to Riskesdas (2013), Acute Respiratory Infection (ARI) is still an important health problem to note, this disease can cause death in toddlers in several developing countries including Indonesia. ARI is an acute infection of the upper and lower respiratory tract caused by bacteria and viruses (Wijayaningsih, 2013).

Acute respiratory infections are the leading cause of morbidity and mortality due to infectious diseases in the world. Nearly 4 million people die from acute respiratory infections each year, of which 98% of those deaths are caused by lower respiratory infections. Mortality rates are particularly high in infants, children, and the elderly, especially in low- and middle-income countries. Acute respiratory infections are one of the most common causes of consultation or treatment in healthcare facilities, especially in pediatric services. (WHO, 2020).

Based on the results of Riskesdas in 2018, the prevalence of ARI in Indonesia based on the diagnosis of health workers (health workers) and symptoms in 2018 was 9.3% (Ministry of Health of the Republic of Indonesia, 2018). While the prevalence of ARI in 2018 in East Java showed a figure of 9.5% (Ministry of Health, 2018).

According to the Magetan District Health Office, the disease that has dominated in recent years is an acute respiratory infection. In the 2021 Health Office profile data, ARI is included in the top 10 diseases with a high number of cases reaching 14.94%. (Health profile of Magetan Regency, 2021)

Based on data from the Takeran Subdistrict Health Center as of October 16, 2022, there were 168 cases of ARI in toddlers. There was a significant increase from the previous year. ISPA in 2021 recorded 73 cases with a percentage of 6%. ISPA is also the highest problem in the Takeran sub-district health center. (Puskesmas Takeran, 2022)

The habit of family members smoking can also be a factor that results in ARI. Based on preliminary studies, some respondents' homes found 2 heads of families smoking in one room and near toddlers. Many family members were found smoking in the house when interviewed, from some respondents also many who did not admit to smoking habits so researchers could see the number of cigarette butts in ashtrays at home or could see around the house. This research is in line with the research (Son, Moh. Adib and Prayitno., 2022)

This is following Astuti's research which found that 54 toddlers (65.8%) were most often exposed to ARI due to exposure to tobacco smoke, and there was a relationship between smoking habits and the incidence of ARI in infants in Sidosari Village, Salaman District, Magelang Regency with a p-value of 0.000.(Astuti and Siswanto, 2022)

## Method

This study uses a quantitative case-control design of analytical studies that analyze causal relationships using reverse logic, namely determining the disease (*outcome*) first and then identifying the cause (risk factors) to determine the influence of smoking family members' habits on the incidence of respiratory tract diseases in the work area of the Takeran Health Center. This study used an analytical survey method with a *case-control* approach. The sample of this study was 152 respondents consisting of 76 cases and 76 controls. Data collection was carried out using questionnaire sheets and observation sheets. The data analysis used is a univariate, bivariate analysis using *the Chi-Square test*.

This research uses a sampling technique method using *simple random sampling*. taken from a portion of the population at random without regard to position status or anything else.

## Result

**Table 1.** Frequency Distribution of Respondents' Characteristics Based on the Incidence of ARI in Toddlers in the Working Area of Takeran Health Center

Characteristics	Frequency	Percentage (%)
<b>Gender</b>		
Man	76	51,3
Woman	76	48,7
<b>Smoking Habits</b>		
Not Eligible	71	46,7
Qualify	81	53,3
<b>ARI Occurrence</b>		
ISPA	76	50
Tidak ISPA	76	50
<b>Total</b>	<b>152</b>	<b>100</b>

Based on table 1, shows the distribution of respondents based on gender, the majority of male toddlers are 76 respondents with a percentage of 51.3%. The distribution of respondents based on the habits of family members' smoking, the majority of respondents with smoking habits were 71 respondents with a percentage of 46.7% while respondents who did not have smoking habits were 81 with a percentage

of 53.3%. It can be seen that from 152 respondents, the number of toddlers who experienced ARI was 76 toddlers and 76 toddlers did not experience ARI.

**Table 2.** Cross-tabulation of Smoking Family Members' Smoking Habits with the Incidence of ARI in Toddlers in the Working Area of Takeran Health Center

Smoking Habits	Isipa Genesis				Total		OR	95%CI	P
	Case		Control		N	%			
	N	%	N	%					
Not eligible	36	50,7	35	49,3	71	100			
Qualify	40	49,4	41	50,6	81	100	1,054	(0,557 -1,994)	1.000
<b>Total</b>	<b>76</b>	<b>100</b>	<b>76</b>	<b>100</b>	<b>152</b>	<b>100</b>			

Based on the table, it is known that respondents who have smoking habits and toddlers suffer from ARI as many as 36 respondents (50.7%) and 35 (49.3%) respondents who have smoking habits and toddlers do not suffer from ARI. While respondents with no smoking habits and toddlers suffering from ARI as many as 40 respondents (49.4%) and respondents who do not have smoking habits and *toddlers not suffering from ARI* as many as 41 (50.6%) respondents.

The results of the *Chi-Square statistical test* obtained a value of *P-Value* = 1.000 which means there is no Influence Between the Habit of Family Members Smoking with the Incidence of ISPA in Toddlers in the Working Area of the Takeran Health Center.

## Discussion

Based on the results of research that has been conducted, it was found that the value of *P-Value* = 1.000 which means there is no influence between the habits of family members smoking with the incidence of ARI disease in toddlers in the work area of the Takeran Health Center. This is in line with the research of Suci Wulandhani in the Bontoala sub-district in 2022, it was found that there was no significant influence between smoking habits and the incidence of ARI in the Bontoala sub-district with the results of *p-value* = 0.407.

This research is not in line with Asnita Yani in Tador Sea Village, Coal District From the results of this study it can be concluded that: Most respondents have the habit of family members who smoke in the house, which is 33 (64%) respondents. Most of the respondents under five affected by ISPA amounted to 39 (78%) respondents. It was found that there was a significant relationship between smoking habits in the house with Ispa in toddlers in Tador Sea Village, Batubara Regency with a probability of 0.001. The risk of experiencing ISPA in toddlers who live in homes with smoking habits in the house is 1.875 times compared to homes that do not have smoking habits. (Majrul, Ay, Nurmauli, B, 2022)

The habit of family members smoking in the Taketan Health Center Working Area does not influence the incidence of ARI. Respondents with smoking family members qualified and suffered from ARI as many as 40 respondents. This can happen because the respondent's home environment is not following healthy home standards such as temperature, humidity, and ventilation areas that are not yet appropriate. A damp and rarely cleaned house results in accelerated growth of bacteria and viruses. While respondents with family members' smoking habits and suffering from ARI were as many as 36 people. This is because the family member smokes in the same room with the toddler or after smoking does not change the clothes of cigarette smoke attached to the clothes and after that carrying the toddler can inhale the smoke. For respondents with smoking family members, 35 people did not qualify and did not suffer from ARI. This is because family members who smoke are not near toddlers and also factors in the physical environment of the house are clean so that toddlers do not suffer from ARI. Respondents with eligible smoking family members who did not suffer from ARI were 41 people. This is because the home environment is clean and has adequate ventilation so that air circulation often changes so that it does not result in a damp house and can prevent the growth of bacteria and viruses that cause ARI also no family members who smoke in the house so that toddlers are also not exposed to cigarette smoke.

The limitation of this research is when measuring temperature and humidity because at the time of research, the weather was uncertain, often cloudy but not infrequently also scorching hot, the research was carried out every day from 9 am to 11 am for 15 days. It is possible that with unpredictable weather conditions, the results will be less efficient. It is recommended that future researchers if they want to take temperature and humidity research should expect the weather to be uncertain so that the measurement results are effective.

## Conclusion

Based on the results of research that has been conducted, it was found that the value of *P-Value* = 1.000 which means there is no influence between the habits of family members smoking with the incidence of ispa disease in toddlers in the Takeran Health Center Work Area.

## Author's Contributions

Toddler Cadres in Takeran Health Center Working Area.

## Funding

The study does not accept external costs.

## Statement of the Institutional Review Board

Through research ethics approval from STIKes Bhakti Husada Mulia Madiun.

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## Conflict of Interest:

The researcher stated there was no conflict of interest.

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