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FACTORS AFFECTING THE INCIDENCE OF ISPA TO TODDLERS IN THE BENDAN HEALTH CENTER WORKING AREA

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Abstract

According to the World Health Organization (2023), there are 13 million deaths from acute respiratory infections (ARI) each year, with 4 million occurring in Indonesia. The goal is to reduce ARI deaths by 25% from 2021-2022 and achieve a 10% reduction in mortality over the next seven years. In Indonesia, 4.8% of children under five are diagnosed with ARI, particularly in densely populated areas like Central Java. Factors such as humidity, smoking habits, and maternal education contribute to the risk of ARI in young children. To study these risk factors in Kelurahan Bendan Kergon, analytic quantitative research was conducted in November-December 2024. The population consisted of 870 toddlers aged 1-5 years, with 100 samples selected using the slovin technique. The study used a cross-sectional design with purposive sampling and measured variables using hygrometer and lux meter instruments. Statistical Package for the Social Sciences (SPSS) was used for data analysis, which revealed that some variables, such as knowledge, smoking behavior, and humidity, were not associated with the incidence of ARI. However, lighting level was found to be a significant variable.

Keywords : *ISPA, factor, toddlers, smoking*

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1. Introduction

According to the World Health Organization (WHO), by 2023 globally, around 13 million people will die from acute respiratory infections (ARI). The disease burden varies widely, with more than 4 million of the total 13 million victims coming from two-thirds of global regions. The most affected countries comprise Nepal (0.3%), Sudan (1.5%), China (3.5%), Pakistan (4.3%), Ethiopia (4.4%), Indonesia (38%), & India (48%). AURI now occurs in almost every part of the world and this year the highest number of AURI cases was in the Southeast Asia region. About 30 countries accounted for two-thirds of the total AURI cases with Indonesia being among those countries. From 2021 to 2022, there is a 25% reduction in deaths from AURI, and efforts to reduce mortality towards the end of the next seven years show a target reduction of 32.10%.

According to the Ministry of Health's (MOH) 2023 Indonesian Health Survey (IHSS) report, the prevalence of Acute Respiratory Infections (ARI) among children under five in Indonesia that have been diagnosed by a doctor was recorded at 4.8% in 2023. Jawa Tengah dengan provinsi dengan kepadatan penduduk yang tinggi membuat penyakit ISPA pada balita menjadi cepat menyebar. Oleh karena itu, Jawa Tengah menjadi salah satu provinsi dengan kasus IPA yang tinggi sebanyak 6,7 % pada balita. (Bura et al., 2021).

Pekalongan City, which is a coastal area with warm and often humid temperatures, is one of the factors that support the spread of this AURI disease. Evidently based on data in 2021 AURI disease ranks second with 19.61% of cases in Pekalongan City. (Health Department of Pekalongan City, 2021). The population density of Pekalongan city such as houses with close proximity between houses is one of the reasons for the high rate of AURI. One of the areas in Pekalongan City with a dense population density is in the central part of the city, namely Bendan Kergon Village, West Pekalongan District. Data on ARI in toddlers in Bendan Kergon According to the Bendan Health Center, there were 54 cases of AURI in toddlers in 2024 from January to November.

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Acute Respiratory Infection (AURI) is one of the tropical diseases that often trend in coastal environments. Tropical diseases are diseases that can spread even quickly in warm but humid temperatures. In general, there are several risk factors that can cause AURI, namely host factors, agent factors, physical environmental factors, and social environmental factors. Agent factors include viruses and bacteria. Meanwhile, Among the physical environmental concerns are indoor air pollution, physical conditions of the house such as occupancy density, wall type, lighting in the house, and floor type. The physical environment of the house is one of the factors associated with the incidence of AURI. If the physical environment of the house does not meet health standards, this can serve as a risk factor for the transmission of diseases related to environmental conditions. Toddlers are the most vulnerable group to AURI because they spend more time indoors, in addition to their weaker immune system compared to adults. This is due to the fact that most houses in rural areas still have dirt floors, lack of adequate ventilation, and walls made of wood, which are thought to be risk factors for the onset of ARI in toddlers (43, n.d.).

The home environment can affect the incidence of ARI in toddlers such as temperature, humidity, and lighting levels. These three aspects are interrelated risk factors. Temperature, humidity and lighting levels affect each other. If the temperature and lighting levels are too low, it will increase the humidity of an environment. The humidity of an environment can increase the risk of breeding viruses or bacteria that cause disease, especially ARI. High house humidity can also affect the immune level of the body, especially in toddlers whose immune levels are still low. A decrease in immunity can cause the body to become susceptible to infectious diseases such as ARI. (Sabila R., Amin F.A. and Hasnur H. 2023)

In addition to environmental factors, social factors including maternal education and smoking behavior of family members are social causes that can increase the risk of ARI incidence in toddlers. Families that have members smoking in the home are at risk to health. The home is one of the most exposed places to cigarette smoke, which can increase respiratory infectious diseases. WHO (World Health Organization) analysis shows that the adverse effects of cigarette smoke are greater for passive smokers than active smokers. The smoke inhaled by the smoker is called main smoke, and the smoke coming out of the end of the cigarette is called side smoke. Cigarette smoke is a risk factor for ARI because it interferes with lung immunity, especially if toddlers are exposed to a lot of cigarette smoke, increasing the risk of respiratory diseases, especially ARI.

Behavioral and social factors that can affect the incidence of ARI, especially in toddlers, are how the knowledge of mothers of toddlers. The condition of toddlers such as food intake and toddler hygiene will greatly affect the family, especially the mother. Healthy and clean living behavior to prevent AURI from mothers of toddlers is influenced by the knowledge of mothers of toddlers and their mothers' willingness. Research conducted by Sormin et al, 2023 that if the mother's knowledge is good it will affect how the behavior is better towards the prevention of ARI and if the mother's knowledge is poor it will affect the lack of willingness and ability to prevent ARI in her child. Knowledge is closely related to education.

Therefore, researchers are interested in proving the risk factors for ARI incidence such as maternal knowledge, smoking behavior in the family of toddlers, temperature, humidity and light whether it affects the occurrence of ARI disease in toddlers. Especially in the Bendan Health Center working area. This is because the population of toddlers in the Bendan Kergon area is relatively large with a total of 800 toddlers.

2. Method

The type of research used in this study was analytic quantitative research. This study was conducted to determine the factors that influence the incidence of ARI in toddlers in the Bendan Health Center working area. The approach in this study used a cross-sectional design, which is a research design that measures or observes variables simultaneously, with each subject only measured or observed once. (Riyanto, 2011)

This study was conducted in the Bendan Health Center working area in November-December 2024. The population in this study were toddlers aged 1-5 years whose names were recorded in the Bendan Health Center report, with the sampling technique using simple random sampling. The sample used in this study was 100 of the total population. This study also used measuring

instruments such as hygrometers to measure humidity and room temperature, and lux meters to measure lighting.

After the data is processed, it is analyzed to get the meaning of the data obtained. The results of the data analysis were used to answer the research problem, namely the factors influencing the incidence of ARI in toddlers in the Bendan Health Center working area. Data analysis in this study used computer software, namely SPSS, which consists of Bivariate and Multivariate analysis.

3. Results and Discussion

Bivariate Analysis

Bivariate analysis was employed to assess the connection between the dependent variable and the independent variable, specifically the maternal understanding of ARI. The study investigated maternal awareness regarding toddlers, the smoking habits of family members, the temperature, the humidity in the room, and the lighting conditions of the homes where toddlers reside. The chi-square test was applied in this research, utilizing an alpha significance level of 0.05.

Table 1. Frequency Distribution of Maternal Knowledge

		Knowledge		Total
		Good	Bad	
Acute Respiratory Infections (AURI)	Acute Respiratory Infections (AURI)	13	5	18
	Not Acute Respiratory Infection (AURI)	69	13	82
Total		82	18	100

Table 2. Relationship between ARI in toddlers and knowledge of mothers of toddlers

	Value	df	Asymtotic Significance (2 sided)	Exact Sig. (2 sided)	Exact Sig (1 sided)
Person chi square	1.422[a]	1	.233	.307	.193
N of Valid Cases	100				

From the results of the research conducted, out of a total of 100 respondents, it is known that 82 mothers of toddlers have good knowledge about ARI. However, the number of mothers whose toddlers were affected by ARI was 13 mothers with good knowledge and there were 5 with poor knowledge. While in toddlers who are not affected by ARI, there are 69 with good knowledge and 18 with poor knowledge. The results of the chi square statistical test obtained a p value of 0.23 (pvalue> 0.05) which means Ho is accepted and Ha is rejected, which means that there is no relationship between maternal knowledge and the incidence of ARI in toddlers in the Bendan Health Center Work area of Pekalongan City. This study contradicts research conducted by Lestari S., and Barkah A. (2023) which states that from

research with 85 respondents of mothers of toddlers that of the 7 respondents whose knowledge was lacking, all of their toddlers experienced ARI (100%), while as many as 32 respondents (60.4%) mothers whose knowledge was good, all of their toddlers did not experience ARI and whose mothers who had sufficient knowledge most of their toddlers experienced ARI, namely 23 respondents (92.0%).

Based on research by Sigalingging V.Y., Tampubolon L.F. and Manalu M. (2024) also stated that out of a total of 72 respondents, 28 respondents (38%) whose knowledge was sufficient, most of their children experienced ARI, namely 34.7%. Of the 34 respondents whose knowledge was good, the majority experienced ARI as much as 36.1%. The statistical test results showed a p value = 0.046 where the degree of the coefficient is -0.236 which means there is a relationship between maternal knowledge and the incidence of ARI in children but the strength of the relationship between these two variables is very weak and negatively patterned.

Nevertheless, this research aligns with the investigation carried out by Desri and Kartika (2017) at UPTD Puskesmas Kebun Sikolos in Padang Panjang City, which involved 34 participants. The findings indicated that there was no correlation between maternal understanding and the occurrence of ARI in children under five at UPTD Puskesmas Kebun Sikolos Kota Padang Panjang, with a p-value of 0.697 (Nova & Putri, 2017).

Knowledge does not have an association with the incidence of ARI. According to the author's observation, although the mother already had knowledge about ARI and ARI prevention, she did not have the awareness to do things to prevent it. Other factors that influence knowledge such as education, family background, economy also have an influence on how knowledge is possessed by a person. Knowledge that will be converted into an attitude or basis for decision making is also based on factors in the environment that influence it.

Table 3. Frequency Distribution Table of Smoking in the Family

		Smoking		Total
		Good	Bad	
Acute Respiratory Infections (AURI)	**Acute Respiratory Infections (AURI)**	6	12	18
	Not Acute Respiratory Infections (AURI)	21	61	82
Total		27	73	100

Table 4. Relationship between ARI in toddlers and the incidence of smoking in the family

	Value	df	Asymtotic Significance (2 sided)	Exact Sig. (2 sided)	Exact Sig (1 sided)
Person chi square	.447[a]	1	.504	.561	.345
N of Valid Cases	100				

According to the findings from statistical evaluations through correlation analysis, the

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p-value obtained was 0.504, indicating that the p-value is greater than 0.05. This implies that, from a statistical perspective, there is no meaningful connection between smoking habits and the occurrence of ARI in young children. These findings align with the research outcomes presented by Mulyadi and Nugroho in 2018, which also indicate a lack of association between household smoking and the rate of ARI in toddlers, showing a p-value of 1.000 (p>0.005).

Reychell (2020), said that smoking in the house is one of the risk factors that cause ARI. Passive smokers have a greater risk than active smokers. can be one of the indirect factors that can aggravate the incidence of ARI. However, based on the results of the study, the number of respondents who smoked was less than the number of respondents who did not smoke, thus affecting the results of the study. This study is also in line with research conducted by (Latifah Hanum, 2020) which says that smoking habits are not associated with the incidence of ARI in toddlers where p = 0.458 which means p> 0.05.

Based on observations made by researchers that there is no significant relationship between smoking behavior and the incidence of ARI, this could be due to the fact that there are several respondents who have a long smoking history but have stopped so that these respondents are categorized as non-smoking respondents. Although in theory smoking is one of the factors causing the incidence of ARI because cigarette smoke inhaled by humans periodically will affect human respiratory disorders so that they can get ARI disease. Active smokers are advised to quit smoking or not smoke carelessly and change healthy living behaviors such as consuming healthy foods, exercising regularly.

According to the researchers, the absence of a relationship between smoking habits of family members and the incidence of ARI in children 1-5 years is due to children being kept away when someone smokes. ARI can also be caused by other environmental factors such as dust, burning smoke, house ventilation, nutritional status, immunization, or the behavior of people coughing near toddlers.

Table 5. Frequency Distribution of Home Room Temperature

		Room Temperature		Total
		Good	Bad	
Acute Respiratory Infections (AURI)	**Acute Respiratory Infections (AURI)**	6	12	18
	Not Acute Respiratory Infections (AURI)	18	64	82
	Total	24	76	100

Table 6. Relationship between ARI in toddlers and house temperature

	Value	df	Asymtotic Significance (2 sided)	Exact Sig. (2 sided)	Exact Sig (1 sided)
Person chi square	1.048[a]	1	.306	.363	.231
N of Valid Cases	100				

According to the findings from the bivariate analysis through correlation analysis, the p-value equals 0.306, indicating that this p-value is greater than 0.05. Thus, it suggests there

is no noteworthy connection between temperature and the occurrence of ARI. These findings are consistent with earlier studies conducted by Andi Ruhban and colleagues (2023) regarding the link between the physical conditions of homes and occupant behavior in relation to ARI occurrences in Balla Village, Bajo District, Lawu Regency. From the bivariate analysis, the p-value is determined to be 0.235, indicating that it exceeds 0.05, which in turn means there is no significant correlation between the temperature of the room and the incidence of ARI.

At the time of taking measurements, the room temperature was influenced by the intensity of rain, because when measuring temperature it was raining. Although in theory temperature can affect the incidence of ARI because low or high temperatures are factors for pathogenic microorganisms to multiply at these temperatures. The results of this study are in line with the results of research conducted by (Agungnisa, 2019) whose p value = 1.000> 0.05 indicates that there is no relationship between temperature and the incidence of ARI disease. Air temperature is a state of hot or cold air. Temperature plays a very important role in human life. Temperature is the content of water vapor in the room. The tool used to measure temperature indoors and outdoors is a Hygrometer.

Based on the decision of the Indonesian Minister of Health No. 1077/Per/V/2011 concerning housing health requirements, the ideal and comfortable air temperature ranges from 18°C - 30°C. If the air temperature is above 30 ° C, it is lowered by increasing air circulation by increasing ventilation and if the temperature is less than 18 ° C, room heating is needed, which uses energy sources that are safe for health and the environment. Room temperature can be affected by air movement, outside air temperature, temperature of objects around and air humidity.

Table 7. Frequency Distribution of House Humidity

		Humidity		Total
		Good	Bad	
Acute Respiratory Infections (AURI)	**Acute Respiratory Infections (AURI)**	4	14	18
	Not Acute Respiratory Infections (AURI)	25	57	82
Total		29	71	100

Table 8. Relationship between ARI of toddlers and indoor humidity

	Value	df	Asymtotic Significance (2 sided)	Exact Sig. (2 sided)	Exact Sig (1 sided)
Person chi square	.490[a]	1	.484		
				.577	.349
N of Valid Cases	100				

Based on the distribution data, it was discovered that there are 4 residences exhibiting adequate humidity levels along with a positive occurrence of ARI. In contrast, 14 residences show inadequate humidity levels but still have a positive ARI presence. Additionally, 25 residences maintain good room humidity, yet the toddlers residing there do not exhibit ARI symptoms, while 57 residences present poor humidity levels and also lack ARI cases. Upon

conducting a bivariate analysis using the Chi-Square test, a p-value of 0.484 was achieved, indicating that the p-value is greater than 0.05, thus suggesting that no notable correlation exists between humidity levels and the occurrence of ARI among toddlers. The findings of this investigation align with a study by Pertiwi in 2017, which was undertaken in the UPTD Puskesmas Semplak area in 2016. This study evaluated environmental factors in relation to the prevalence of URI in young children, specifically focusing on bedroom humidity, and concluded that there was no significant relationship between bedroom humidity and the occurrence of URI in toddlers.

This is contrary to research High humidity in the house can affect the decrease in a person's immune system, especially toddlers whose immune system is still very vulnerable and increase the body's susceptibility to disease, especially infectious diseases. Humidity can also increase the resistance of bacteria, low or too high humidity can cause the growth of microorganisms very quickly (Prabu, 2010).

The results are also different from the results of Ningrum's research (2015), based on the chi-square analysis test showed the results of the P value = 0.484 (p-value> α), which means that there is no relationship between the humidity of the respondent's room and the incidence of non-pneumonia ARI in toddlers.

This is also influenced by the floor of the respondent's house, which some houses are still semi-permanent, but some houses have been tiled. Most of the houses of respondents who suffer from ARI have tiled floors. High humidity can also be influenced by behavior in opening windows every day. Some respondents are sometimes reluctant to open their windows due to natural factors (dry season). They assume that dust will enter the house and cause the house to become dirty.

Table 9. Frequency Distribution of Room Lighting

		Lighting		Total
		Good	Bad	
Acute Respiratory Infections (AURI)	**Acute Respiratory Infections (AURI)**	15	3	18
	Not Acute Respiratory Infections (AURI)	45	37	82
	Total	60	40	100

Table 10: Relationship between ARI in toddlers and room lighting level

	Value	df	Asymtotic Significance (2 sided)	Exact Sig. (2 sided)	Exact Sig (1 sided)
Person chi square	4.980[a]	1	.026	.033	.021
N of Valid Cases	100				

According to the outcomes obtained from the bivariate analysis conducted through the chi-square test, the p-value is 0.026, indicating that the p-value is less than 0.05. This suggests a notable correlation between the lighting in rooms and the occurrence of ARI in young children. These findings are consistent with Yusuf's study (2014) in the village of Lapulu within the Abeli sub-district, which found a link between natural light and the frequency of

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ARI among the community in Lapulu, observing a p-value of 0.001. Additionally, research performed by Pertiwi (2016) at the Semplak health center also suggests that the lighting in bedrooms is associated with the occurrence of ARI in toddlers.

Natural lighting is considered good if the amount is between 60-120 lux and bad if it is less than 60 lux or more than 120 lux. The thing that needs to be considered in making windows, it is necessary to strive so that sunlight can directly enter the room, and is not blocked by other buildings. The function of the window is not only as ventilation but also as a way for light to enter.

The intensity of natural lighting in a house can be influenced by the amount of ventilation and windows that are opened every day. This will adversely affect the health of the occupants of the house if the windows are less spacious and rarely opened during the day, do not have home ventilation, and most houses face west and north. Natural lighting in the house is lighting in the house in the morning, afternoon, or evening that comes from direct sunlight entering through windows, vents, or glass roof tiles for at least 10 minutes per day. Sunlight is important, because in addition to killing pathogenic bacteria in the house it also reduces indoor humidity in the house (Azwar, 1990).

The entry of sunlight is only through windows and ventilation, so there is also a limited room that is illuminated by the sun (ultraviolet) so there is a possibility that it is not enough to reduce the humidity of the room and the effect of ultraviolet rays to kill germs is limited (Basuki, 2008). Good lighting can reduce levels of microorganisms because morning sunlight introduces ultraviolet light into the house. Efforts that can be made are by installing several glass tiles on the roof of the house, and making ventilation in accordance with applicable criteria (Notoatmodjo, 2009).

Sunlight is important for killing bacteria, such as those that cause ARIs. Healthy homes need to have large enough windows, at least 15% to 20% of the floor area. Good lighting reduces microorganisms due to ultraviolet light. Research shows there is a relationship between lighting and the incidence of URTIs.

There is an association between lighting and the incidence of ARI (PR = 3.35; p = 0.01), Unqualified bedroom lighting is a risk factor for ARI infection. Light supply in the bedroom comes from ventilation, windows, and lamps with an intensity of 60 lux. Lack of light can favor the growth of viruses and bacteria.

Multivariate Analysis

Tabel 11. Variables in The Equation

		B	S.E.	Wald	df	Sig.	Exp (B)
Step 1[a]	Knowledge	-.059	.650	.613	1	.434	.601
	Smoking	.409	.589	.481	1	.488	1.505
	Temperature	.617	.626	.972	1	.324	1.854
	Humidity	-.548	.660	.690	1	.406	.578
	Lighting	1.520	.692	4.823	1	.028	4.573
	Constant	-.648	2.516	.066	1	.797	.523

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According to the table, the maternal knowledge variable shows a significance value of 0.434, which exceeds the alpha level of 0.05. This suggests that maternal knowledge does not have a partial impact on the occurrence of ARI. This aligns with the findings of Hermanto et al. (2023), which indicate that the Partial Test of Knowledge Factors concerning Family Behavior (X1) revealed that the knowledge variable (X1) and family behavior (Y) did not achieve significance with a value of 1.553, which is greater than 0.05. This implies there is no significant partial relationship between knowledge and family behavior. Consequently, it can be inferred that hypothesis H6 is rejected, indicating no connection between knowledge and family behavior regarding ARI prevention. Conversely, research by Lestari S and Barkah A. (2023) suggests a connection between maternal knowledge and the occurrence of ARI in young children, as shown by statistical analysis yielding a chi-square p-value of 0.0003 (which is less than 0.05). Nevertheless, knowledge alone is not the primary determinant of ARI incidence. It is influenced by various factors, including education. While good education may not ensure high knowledge levels, especially concerning ARI, it still plays a role.

The smoking variable within the family of little children produces a sig value of 0, 488 which implies less than 0, 05 so it can be deciphered that smoking behavior within the family of toddlers has no fractional impact on the frequency of ARI in little children. This is often in understanding with the test that has been done on the test of the relationship between smoking behavior with the frequency of ARI in little children who are not related, so it automatically does not have a critical impact between the two. Based on perceptions also most families who smoke within the work environment or exterior the domestic and don't meet with little children. Usually one calculate why smoking behavior within the family has no impact on the rate of ARI in little children.

The temperature variable has a sig. value of 0.324 which means that the value is greater than 0.324 which means greater than the alpha degree of 0.05 which means that temperature has no partial effect on the incidence of ARI in children under five. Other climatic factors also influence the disease, including seasonality, topography and humidity. Topography can change the amount of sunlight that reaches an area. These results are in line with research by Istihoroh et al. (2018) on the relationship between the physical condition of the house and ARI disease at Puskesmas Kadur Kab. Pamekasan, showing the chi-square test of house air temperature and ARI is not positively correlated p = 0.8 (p =>0.05). The density of occupants, poor ventilation, and building materials and structures need to comply with the Regulation of the Minister of Health of the Republic of Indonesia Number 1096 / Menkes / Per / VI / 2011. Indoor air temperature affects the growth of disease-causing microorganisms, even though air is not the natural habitat of germs. (Stryjakowska-Sekulska et al., 2007).

The stickiness variable features a sig esteem of 0.406 which implies it contains a esteem of more than 0.05 or the alpha degree. So it can be concluded that stickiness within the inquire about that has been done this time does not have a halfway impact on the frequency of ARI in little children. Mugginess has no impact on this test since there's no relationship between stickiness and the frequency of URI, so of course the degree of impact of a variable does not exist.

The Lighting variable incorporates a sig. esteem of 0.028 which implies the esteem is littler than 0.05 or the degree of alpha. So it can be concluded that room lighting in the house includes a partial impact on the rate of ARI in little children. Lighting encompasses a least edge standard of 60 lux and isn't astonishing in understanding with Permenkes RI Number. 1077/Menkes/Per/V/2011 concerning discuss wellbeing rules.The results of this consider are in agreement with inquire about conducted by Maulidah M (2020) that gotten P of 0.00 hence the sig is littler than the alpha esteem (0.05) which implies there's a critical impact between the level of room lighting with the incidence of ARI in little children. Included with the results of perceptions that have been made within the field that most of them are due to the position of the house in an awfully thickly populated environment, so this can be too one of the causes of a really dim room that's underneath standard, particularly within the toddler's room. Jaida, the community depends on lights for lighting since of the negligible daylight entering. Since of the need of natural light from approaching daylight, this will make viral microbes and other pathogens that live will survive for a long time within the domestic space and will not die. This

will put the family living within the house at chance of sickness, particularly ARI.Conclusions and Suggestions

From the comes about of the inquire about conducted it can be concluded that the chance 29 components for the frequency of ARI such as maternal information, smoking rate in the family, room temperature level, mugginess level and lighting level don't all have a relationship with the frequency of ARI. There are numerous other components that back why these factors don't have a relationship with the frequency of ARI in little children. From the comes about of the consider it can be found that as it were the lighting variable is related and impacts the frequency of ARI in children beneath five a long time ancient within the Bendan Wellbeing Center range. This appears the solid relationship of lighting is exceptionally solid against the incidence of ARI, against the transmission of specialists of ARI within the form of infections and microscopic organisms contaminating ARI. Encourage investigate can be done more within the ponder of why the factors of maternal information, the rate of smoking within the family, the level of room temperature and mugginess don't have a relationship with the rate of ARI in little children. From the comes about of the investigate conducted it can be concluded that the chance components for the frequency of ARI such as maternal information, smoking frequency in the family, room temperature level, mugginess level and lighting level don't all have a relationship with the rate of ARI. There are numerous other variables that back why these factors don't have a relationship with the frequency of ARI in little children. From the comes about of the think about it can be found that as it were the lighting variable is related and impacts the incidence of ARI in little children within the Bendan Health Center range.

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Hubungan Antara Kondisi Fisik Rumah Dan Perilaku Penghuni Dengan Kejadian ISPA Di Desa Balla, Kecamatan Bajo, Kabupaten Luwu

Faktor Host dan Environment sebagai Faktor Risiko ISPA pada Balita di Puskesmas Tulis

Faktor-Faktor yang Berhubungan dengan Kejadian ISPA pada Anak Usia Dibawah Lima Tahun di Puskesmas Lebakwangi Kecamatan Cigudeg Kabupaten Bogor

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