DETERMINANTS OF PNEUMONIA SYMPTOMS IN TODDLERS IN THE PAAL V HEALTH CENTER WORKING AREA OF JAMBI CITY

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ABSTRACT

Pneumonia is a disease in children under five which causes the highest number of deaths at the global level. Pneumonia cases in toddlers continue to increase and Indonesia is ranked 8th in the world. The aim of this research is to determine the factors associated with pneumonia symptoms in toddlers in the working area of the Paal V Health Center, Jambi City. Cross sectional research design. The research was conducted in the Paal V Community Health Center Working Area, Jambi City. The total sample was 70 toddlers taken using Accidental Sampling. The independent variables are house temperature, house humidity, residential density, house ventilation, lighting, smoking habits, mother's knowledge and exclusive breastfeeding. Data were analyzed using the Chi Squar e or Fisher Exact test. Toddlers with Pneumonia Symptoms are 65.7%. Factors associated with pneumonia symptoms in toddlers are house humidity (PR=0.60; 95% CI=0.37-0.95), house lighting (PR=0.55; 95% CI=0.29-1, 04), smoking habits (PR=1.50; 95% CI=098-2.28) and maternal knowledge (PR=2.46; 95% CI=1.08-1.97). Meanwhile, those that are not related to pneumonia symptoms in toddlers are house temperature, house ventilation, residential density and exclusive breastfeeding. Risk factors for pneumonia symptoms in toddlers are house humidity that does not meet the requirements, house lighting that does not meet the requirements, the presence of smoking habits in the house, poor maternal knowledge. It is hoped that mothers who have toddlers will pay attention to the physical environment of the house and reduce smoking habits in the house

Keywords: Pneumonia, Environment, Child, Mother

INTRODUCTION

Pneumonia is a respiratory infection that causes death in children under five years old, and it is one of the leading causes of child mortality in the world, especially in Indonesia, a developing country. Pneumonia is the second leading cause of death in children. (Widiasih 2018) According to UNICEF, 2023 seen in the graph above pneumonia killed more children in 2000 reaching 1,590,874 deaths and in 2021 as many as 725,557 than any other infectious disease. (Valentine 2022) Jambi Province has 9 districts and 2 cities, namely Jambi City. Jambi City has 20 health centers that have been spread in each sub-district, in 2022 Jambi City has a population of 619,553 people with a total of 61,270 toddlers. The prevalence of pneumonia among toddlers in Jambi

City in 2019 was 56.17% and in 2020 it decreased to 19.27% and in 2021 the prevalence decreased again to 13.56%. In 2022, the prevalence of pneumonia among under-fives was 10.44%. (Keuangan 2022) Puskesmas Paal V, the number of toddlers in 2022 was 4,551 and also known cases of pneumonia in toddlers at Puskesmas Paal V Jambi City in 2022 were 87 toddlers.

Inadequate housing conditions can facilitate the occurrence of pneumonia symptoms. Lack of and more light will result in pneumonia symptoms in toddlers because the complex is too tight. Based on research conducted by Sa'diyah, Utomo and Hikmandari, (2022) showed that the lack of natural lighting in the house had a significant relationship with the symptoms of pneumonia in children under five. (Sa'diyah, Utomo, and Hikmandari 2022)

Based on research conducted by Aristatia and Yulyani (2021), ventilation is very influential on the incidence of pneumonia where the lack of ventilation results in a lack of 02 and toxic CO2 levels will increase in the house.

Maternal knowledge is also a factor that causes pneumonia symptoms in toddlers. Based on research by Wibowo and Ginanjar, (2020) there is a relationship between maternal knowledge and symptoms of pneumonia in toddlers where the presence of pneumonia symptoms can be caused by ignorance or lack of maternal knowledge about pneumonia. (Wibowo and Ginanjar 2020)

OVERVIEW

Pneumonia is an acute respiratory infection that can cause inflammation of the air sacs in the lungs (alveoli) and surrounding tissues, commonly caused by bacteria, viruses and fungi (Dadonaite & Roser, 2019; Katz & William, 2018; UNICEF, 2016). (Novarianti et al. 2021)

Pneumonia often affects children under 5 years old and is caused by infectious agents such as viruses, bacteria, mycoplasma, or it can also occur due to the aspiration of certain substances. Symptoms such as coughing and shortness of breath are often characteristic of this condition. This is very helpful to understand the characteristics of pneumonia and can be the basis for further prevention and treatment efforts. Pneumonia can be caused by bacteria such as Streptococcus pneumoniae, Respiratory Syncytial Virus, influenza virus type A or B, Human Rhinovirus, Human Metapneumovirus, Adenovirus and Parainfluenza virus. (Ayu and Kasih Permatananda 2021) Toddlers infected with pneumonia will experience symptoms of fever, cough, shortness of breath, runny nose, sore throat and sweating. (Kementerian Kesehatan RI, 2018)

There are several other symptoms that are often encountered in toddlers including chills, cough, fever, headache, loss of appetite. Toddlers with severe Pneumonia may experience shortness of breath or difficulty breathing, lower chest wall indrawing (chest up and down and there is an inward pull when inhaling). Toddlers affected by pneumonia will experience various symptoms such as the description (Misnadiarly, 2008) & (Riskesdas, 2018), which are as follows:

1. Fever, this is one of the symptoms with inflammatory inflammation.
2. Nausea and loss of appetite, increased secretion production, especially in the respiratory tract, can occur in response to a variety of health problems

3. Cough, Respiratory infections such as pneumonia can cause coughing as the body tries to clear pathogens that enter the respiratory tract.
4. Shortness of breath, this symptom occurs when a person finds it difficult to breathe or breathe air.
5. Weakness / Fatigue, this can occur in a variety of situations and shortness of breath is one of the factors that cause feelings of weakness and fatigue.
6. Rapid breathing, this symptom is a common symptom that can occur in a variety of health conditions, including pneumonia.

The determinants of pneumonia symptoms are divided into two: intrinsic factors and extrinsic factors. Which includes intrinsic factors:

Age,The age factor is also strongly associated with pneumonia symptoms, emphasizing the importance of routine health monitoring of toddlers and the provision of appropriate care (Irma, 2011). (Fatimah, Sukartini, and Tandirogang 2020)

Based on research conducted by (K. Ritonga and B. Kurniawan, 2020) that the most affected by pneumonia were men with a percentage of (52.5%). Based on research conducted by (Andayani, Nauval and Zega, 2020), it shows that toddlers with pneumonia tend not to be exclusively breastfed and there is a relationship between exclusive breastfeeding and the incidence of pneumonia in toddlers.

Which includes extrinsic factors, namely:

Lighting, Lighting standards in a healthy home and according to the requirements are at least ≥ 60 luv to ≤ 120 lux, this is based on the Minister of Health Regulation No.1077 / MENKES / PER / V / 2011 concerning guidelines for air health in the home space. A comfortable and healthy room is if the light is normal and according to applicable standards. (Zolanda, Raharjo, and Setiani 2021) The health standard for a suitable and healthy temperature is 180C - 300C according to Permenkes RI No. 1077/2011 concerning Guidelines for Air Health in Home Spaces. Temperature with an unfavorable degree will result in the proliferation of disease seeds, including causing pneumonia symptoms in toddlers.

Based on Permenkes No. 1077/2011 states that the normal occupancy density is the number of family members of 4 people with a sleeping area of ≥10m2, and there are many other extrinsic factors such as home ventilation, home humidity, smoking habits in the house and also poor maternal knowledge.

RESEARCH METHODOLOGY

With a cross-sectional research design using an observational analytic approach. In this study, there are no solutions or suggestions given by researchers to the observed variables, but rather observations are made to explore the relationship or influence between the dependent variable (pneumonia symptoms in toddlers) and the independent variables (ventilation, occupancy density, temperature, humidity, lighting, maternal knowledge, and maternal education). This study took place in the Paal V Health Center Working Area of Jambi City, which is divided into 3 villages. The research time began in January 2024 until completion. With a population of toddlers living in the Paal V Health Center working area of Jambi City in 2022 as many as 4,551 toddlers, with a sample size of 70 toddlers. This study used Accidental Sampling, where researchers randomly

sampled from the population and carried out directly to the balta house. The measuring instruments used are thermohygrometer, rollmeter, luxmeter.

RESEARCH RESULTS

a. Univariate Analysis

Table1. Distribution of Respondents of Pneumonia Symptom Variables in Toddlers in the Paal V Health Center Work Area of Jambi City

Pneumonia Symptoms	Frequency *(f)*	Persentage %
Symptomatic	46	65,7
Not symptomatic	24	34,3
House Temperature		
Qualified	53	75,7
Not eligible	17	24,3
House humidity		
Qualified	24	34,3
Not eligible	46	65,7
Occupancy density		
Qualified	33	47,1
Not eligible	37	52,9
House ventilation		
Qualified	41	58,6
Not eligible	29	41,4
House lighting		
Qualified	15	21,4
Not eligible	55	78,6
Smoking habit		
Available	44	62,9
Does not exist	26	37,1
Mother's knowledge		
Good	20	28,6
Not good	50	71,4
Exclusive breastfeeding	63	90,0
Yes	7	10,0
No		

Based on the results of the analysis in Table 1, the frequency distribution of pneumonia symptoms was mostly symptomatic with 46 toddlers (65.7%) compared to asymptomatic with 24 toddlers (34.3%). It is known that the frequency distribution of home temperature is mostly normal as many as 53 (75.7%), more home humidity is not according to health standards as many as 46 (65.7%), more occupancy density is not according to health standards as many as 37 (52.9), the frequency distribution of home ventilation mostly meets health standards as many as 41 (58.6%), most home lighting does not meet the requirements as many as 55 (78.6%), more smoking habits smoke at home as many as 44 (62.9%), most mothers'

knowledge is not good as many as 50 (71.4%), the majority of exclusive breastfeeding has been given exclusive breastfeeding as many as 63 (90.0).

b. Bivariate Analysis

Table 2.Relationship between Independent Variables and Pneumonia Symptoms in Toddlers at the Paal V Health Center Work Area in Jambi City

Variable	Pneumonia Symptoms				Amount		*P-Value*	PR (95% CI)
	Symptomatic		Not symptomatic					
	n	%	n	%	n	%		
House temperature								
37	69,8	16	30,2	53	100	0,246	1,31	
Qualified								
9	52,9	8	47,1	17	100		(0,81-2,13)	
Not eligible								
House humidity								
Qualified	11	45,8	13	54,2	24	100	0,017	0,60
Not eligible	35	76,1	11	23,9	46	100		(0,37-0,95)
Occupancy density								
25	75,8	8	24,2	33	100	0,131	1,33	
Qualified								
21	56,8	16	43,2	37	100		(0,94-1,87)	
Not eligible								
House ventilation								
26	53,4	15	36,6	41	100	0,799	0,92	
Qualified								
20	69,0	9	31,0	29	100		(0,65-1,28)	
Not eligible								
House lighting								
Qualified	6	40,072,7	9	60,0	15	100	0,030	0,55
Not eligible	40		15	27,3	55	100		(0,29-1,04)
Smoking habit								
Available	33	75,0	11	25,0	44	100	0,041	1,50
Does not exist	13	50,0	13	50,0	26	100		(0,98-2,28)
Mother's knowledge								
17	85,0	3	15,0	20	100	0,050	2,46	
Good								
29	58,0	21	42,0	50	100		(1,08-1,97)	
Not good								
Exclusive breastfeeding								
Yes	41	65,1	22	34,9	63	100	1,000	0,91
No	5	71,4	2	28,6	7	100		(0,55-1,50)

Based on the results of the analysis in Table 2, it is known that the temperature of houses that meet the requirements in sanitation is high in pneumonia symptoms in toddlers as many as

37 (69.8%), while the temperature of houses that meet the requirements but are not symptomatic is 16 (30.2%). Abnormal house humidity was found to have high pneumonia symptoms in children under five years old, 35 (76.1%), while normal humidity and no symptoms were 11 (23.9%). Abnormal housing density and symptoms were 21 (56.8%) and abnormal housing density and no symptoms were 16 (43.2%). Abnormal and symptomatic home ventilation was 20 (69.0%), and abnormal and symptomatic home lighting was 40 (72.7%), and the presence of smoking and symptomatic pneumonia was 33 (75.0%), poor maternal knowledge and symptomatic was 29 (58.0%) and exclusive breastfeeding but symptomatic was 41 (65.1%).

DISCUSSION

Relationship between House Temperature and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area in Jambi City

The p-value of 0.246 > 0.05 means that there is no relationship between house temperature and pneumonia symptoms in toddlers. The PR value of 1.31 (95% CI; 0.81-2.13) can be understood that respondents' home temperatures that do not meet health standards have a risk of 1.31 times to be exposed to pneumonia symptoms.

Temperature with an unfavorable degree will cause the emergence of disease seeds. Based on Minister of Health Regulation No.1077/MENKES/PER/V/2021 on Guidelines for Air Health in Home Spaces states that the health standard for a suitable home temperature is 18-300C. Low temperatures can cause humidity in the room and likewise when high temperatures cause heat and cause humidity in the room. (Kesehatan and Indonesia 2011)

Research conducted by Noor and Hansen (2020) obtained a p-value of 0.267 so that it can be understood that there is no relationship between house temperature and pneumonia symptoms in toddlers. (Noor and Hansen 2020) This research is not in line with the research of Agustyana et al (2019) the results of the chi square test obtained a p-value of 0.016 <0.05, namely the relationship between home room temperature and the incidence of pneumonia in toddlers. (Agustyana et al. 2019) Based on the results of direct observation, visits were made to respondents' homes and it was found that the temperature of the house with normal humidity was 53 (75.7%) houses and the temperature of the house with abnormal humidity was 17 (24.2%) houses, some family members or respondents had used air conditioning and most respondents or family members opened the windows of the house and caused a stuffy and hot feeling in the house.

Relationship between Humidity and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area in Jambi City

The p-value of 0.017 <0.05 from the Chi-Square test results means that there is an association between the variable of house humidity and pneumonia symptoms in toddlers. Where the qualified humidity variable is a protective (preventive) factor with a PR value of 0.60 < 1 (95% CI; 0.37-0.95). According to the Kementerian Kesehatan Ditjen PPM and PLP 2002

on the Technical Guidelines for Healthy Home Assessment, heat and humidity in the room are caused by the dirt floor of the house which can cause evaporation in the house due to increased heat. (Ditjen PPM and PLP 2002) During direct observation, 24 houses with normal humidity were found and 46 houses with abnormal humidity. There are still many respondents' houses that use kitchen floors that do not absorb water as many as 13 (28.2%) houses, this can be seen when taking measurements in the kitchen and the presence of puddles on the floor, which causes a high water content so that this condition is quite conducive to the growth and proliferation of agents that cause pneumonia symptoms.

Observations made during the research took place, the researcher argued that the humidity of people's homes was also influenced by the location of community settlements where Simpang III Sipin Village included flood-prone settlements which resulted in very humid and inundated with water as many as 21 (45.6%) houses, precisely when the research took place during the rainy season which resulted in flooding. Abnormal house humidity is caused by high temperatures that cause heat in the room and windows that are not opened so that the room becomes stuffy and there is no room to enter as many as 9 (19.5%) houses.

This study is supported by research by Aristatia and Yulyani (2021) using a statistical test with a p-value of 0.040 <0.05, meaning that there is a relationship between house humidity and pneumonia symptoms in toddlers in the Panjang Health Center Working Area of Bandar Lampung City in 2021. (Aristatia and Yulyani 2021)

The Relationship between Occupancy Density and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area of Jambi City.

Based on statistical tests with a p-value of 0.131 > 0.05, there was no significant association with pneumonia symptoms in toddlers. With a PR value of 1.33 (95% CI; 0.94-1.87), it means that toddlers with abnormal occupancy density have a 1.33 times risk of being exposed to pneumonia symptoms. According to the Indonesian Ministry of Health, 2009, housing density is closely related to indoor air ventilation. Overcrowded living conditions and poorly ventilated air can increase indoor air temperature, the heat of the room is caused by water vapor produced by body metabolism and room objects. The standard occupancy density of a house that meets health standards is ≥10 m2 and is inhabited by 4 family members (Permenkes RI No. 1077 of 2011). This study is in line with the research of Sina et al (2024) where the p-value result was 0.055 > 0.05 which means that there is no relationship between occupancy density and the incidence of pneumonia in toddlers. (Sina et al. 2024)

This study was not supported by the research of Indah, Suryani and Rosalina, (2022) the results of statistical tests found a relationship between occupancy density and the incidence of pneumonia in toddlers with p-value = 0.000 <0.05 and OR value = 5.846 times (95% CI 3.564-9.590) abnormal occupancy density occurred in toddlers compared to toddlers with normal occupancy density. (Indah, Suryani, and Rosalina 2022)

Based on observations made by researchers, it was found that the normal occupancy density was 33 (47.1%) houses and the abnormal occupancy density was 37 (52.8%)

houses. At the time of the study, it was also found that there were 4 residents in 37 houses and more than 4 residents in 33 houses. While there are also residents who are only 4 people but the size of the house is not normal as many as 13 (35.1%) houses and residents who are >4 people and the size of the house is not normal as many as 24 (64.8%) houses.

The Relationship between Home Ventilation and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area of Jambi City.

The p-value of 0.799 > 0.05 was obtained using the Chi-Square test, which means that there is no relationship between home ventilation and pneumonia symptoms in toddlers. The PR value of 0.92 < 1 (95% CI; 0.65-1.28) can be understood that normal ventilation is a protective (preventive) factor against pneumonia symptoms in toddlers. This study was supported by Hariyanto's (2020) research, with a p-value of 0.43 > 0.05, which found no relationship between home ventilation and the incidence of pneumonia in children aged 1-5 years in the Pandanaran Health Center working area in 2018. This study is not in line with research by Suryani and Rosalina (2022) on the Analysis of Risk Factors for Pneumonia Events in Toddlers which obtained results based on the Chi-Square statistical test with a p-value = 0.00 which means that there is a relationship between ventilation and the incidence of pneumonia in toddlers because in this study out of 63 respondents it was found that respondents with abnormal ventilation were 50 people and normal ventilation was 13 people.(Indah, Suryani, and Rosalina 2022)

Based on Permenkes No. 1077 of 2011 concerning Air Health in Home Spaces states that normal ventilation is 10% of the floor area, if it is below 10% then ventilation is said to be abnormal. Based on the results of observations, researchers measured ventilation using a rollmeter tool in 2 rooms, living room, living room, and kitchen room, researchers measured the area of the house door, the area of the house window and the area of the house ventilation holes. During direct observation, it turned out that many people had opened the windows of each room, but there were some respondents' rooms that did not have ventilation as many as 29 houses.

The Relationship between House Lighting and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area in Jambi City.

A p-value of 0.030 <0.05 was obtained, which means that there is an association between house lighting and pneumonia symptoms in toddlers. With a PR value of 0.55 < 1 (95% CI 0.29-1.04) which means that normal lighting is a protective (preventive) factor against pneumonia symptoms in toddlers. According to Notoatmodjo (2003), the absence of sunlight into the room will result in the development or opportunity for disease seeds to be at home and attack toddlers. Qualified lighting is 60-120 lux. Insufficient natural lighting in the sleeping room is one of the factors that affect the incidence of pneumonia. Based on a statement by Soekidjo Notoatmodjo, (2011) that natural lighting (sunlight) is very important in eradicating pathogenic bacteria that enter the house and the light intensity of the house is also influenced by the density of the building and the layout of the house which is dense so

that it hinders the entry of light into the house. This researcher is also in line with the research of Sa'diyah, Utomo and Hikmandari (2022), namely the relationship between lighting and pneumonia symptoms in toddlers using the Chi-Square test (p value = 0.000).

Based on the research that has taken place, researchers took direct measurements in 2 rooms, living room, living room and kitchen using a luxmeter and obtained the results of measurements, namely with lux 60-120 lux as many as 55 houses, with lux < 60 lux as many as 11 houses and > 120 lux as many as 4 houses.

The Relationship between Smoking Habits and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area in Jambi City.

Based on the statistical test, the p-value was 0.041 <0.05, meaning that the smoking habit variable had a significant relationship with pneumonia symptoms in toddlers. The PR value of 1.50 (95% CI; 0.98-2.28) means that the presence of smoking habits has a risk of 1.50 times to cause pneumonia symptoms compared to the absence of smoking habits. According to the theory of Solihati, 2017 in (Sari and Nur Ridza, 2021) the growth and development of toddlers is due to home conditions such as floor type, wall type, humidity, temperature, ventilation and lighting of the house that are not normal will transmit pneumonia symptoms in toddlers. (Sari and Nur Ridza 2021) This study is in line with research by Fajar, et al (2019) with the Chi-Square test with a p-value of 0.002 p<0.05 which means that there is an association between smoking habits and pneumonia symptoms in toddlers. (Fajar, Sulistiyani, and Setiani 2019) This study is not in line with the research of Husna et al (2020) found no association with the incidence of pneumonia p value = 0.931 > 0.05.(Husna, Pertiwi, and Nasution 2022).

Observations showed that some fathers of toddlers smoked directly in front of their children and there were no open vents or windows in the house, resulting in the accumulation of smoke and air pollution in the house and inhaled directly by toddlers and can interfere with the respiratory tract which can lead to pneumonia symptoms such as coughing and shortness of breath.

The Relationship between Maternal Knowledge and Pneumonia Symptoms in Toddlers in the Paal V Health Center Work Area in Jambi City

The p-value of 0.050 <0.05 was obtained with the Chi-Square test, namely the relationship between maternal knowledge and pneumonia symptoms in toddlers. With a PR value of 2.46 (95% CI; 1.08-1.97), poor maternal knowledge will risk 2.46 times the onset of pneumonia symptoms in toddlers.

This study is in line with the research of Intan Permatasari, et al (2023) with a p-value of 0.000 where the p value is <0.05 which means that there is an association between the level of maternal knowledge and the symptoms of pneumonia in toddlers.(Intan Permatasari et al. 2023) This study is not in line with the research conducted by Husna et al (2022) which did not find a significant relationship between maternal knowledge and the incidence of pneumonia in toddlers with a p value of 0.125 > 0.05.(Husna, Pertiwi, and Nasution 2022).

Based on direct observation, the researcher distributed a questionnaire with 10 questions that would be answered directly by

mothers of toddlers, but from the results of the research that had taken place, the majority of the knowledge of mothers of toddlers was categorized as not good with the majority of the scores obtained by mothers of toddlers were very low. After administering the questionnaire, almost all mothers did not know what pneumonia was and almost all mothers refused to answer the questionnaire questions on the grounds that they did not understand and it was not important to the study. Many mothers of children under five were careless in answering the questions, and many refused to answer the questions. 10 questions about pneumonia were given to mothers of children under five and there were 3 questions that many mothers of children under five did not know, namely questions about factors of pneumonia symptoms with a total of 60 (85.7%) people wrong, questions about environmental factors that cause pneumonia symptoms with a total of 59 (84.3%) wrong and questions about other factors of pneumonia symptoms with a total of 55 (78.6%) people wrong.

The Relationship between Exclusive Breastfeeding and Pneumonia Symptoms in Toddlers at the Paal V Health Center Work Area in Jambi City.

A p-value of 1.000 was obtained using the Chi-Square test, which means that there was no association between exclusive breastfeeding and pneumonia symptoms in toddlers. This study is in line with research conducted by Rahima, et al (2022) on the relationship between the incidence of pneumonia and exclusive breastfeeding in toddlers where the results showed that the statistical test results showed a p-value of 0.223, meaning that there was no association between exclusive breastfeeding and the incidence of pneumonia in toddlers. (Rahima, Hayati, and Hartinah 2022)

However, this study is not in line with the research of Nyoman, et al (2022), namely there is a relationship between exclusive breastfeeding and the incidence of pneumonia showing a p-value of 0.000 (p-value <0.05), namely there is a relationship between exclusive breastfeeding and the incidence of pneumonia in toddlers at Patut Patju Hospital, West Lombok in 2022. (Nyoman et al. 2022) The amount of breast milk consumed during breastfeeding is completely sufficient to meet the needs of the baby and according to the baby's condition. Breast milk contains infection-fighting immune substances, including proteins, lactoferrin, immunoglobulins, and antibodies against viruses, fungi and other substances. Based on the results of the study, researchers asked several questions about exclusive breastfeeding for toddlers and the majority of toddlers were given breast milk aged 0-6 months and even up to 2 years of age were still given breast milk. Some mothers of toddlers also give formula milk as a distraction at the age of 0-6 months and even up to 59 months old are still accompanied by formula milk.

Suggestion

For the community to avoid pneumonia symptoms, it is hoped that they can improve their behavior or habits of cleaning the home environment, open windows every day to avoid exposure to dust and not cause pneumonia symptoms.

CONCLUSION

Based on the results of the study, it can be concluded that there is no relationship between house temperature, occupancy density, home ventilation, exclusive breastfeeding with pneumonia symptoms in toddlers in the Paal V Health Center working area of Jambi City. There is a relationship between house humidity, house lighting, smoking habits and maternal knowledge with pneumonia symptoms in toddlers in the Paal V Health Center working area of Jambi City.

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