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Relationship between Nutritional Status and Incidence of Respiratory Tract Pneumonia Lower Respiratory Disorders in Toddlers in the Region Work Health Center

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Abstract

Pneumonia is one of the reason main mortality in children under five, especially in developing countries. Nutritional status toddler be one of factor risk important that can influence vulnerability to infection channel breathing below. Research this aiming for know connection between nutritional status with respiratory tract pneumonia incident breathing lower specifically for toddlers in the work area health center. Research methods used is descriptive analytic with cross sectional approach. Samples were taken purposively sampling 80 toddlers aged 12–59 months. Data were collected through interview use questionnaire and measurement of nutritional status based on indicator weight according to age (BW/A). Research results show that part big toddler with nutritional status bad and lacking having pneumonia. Statistical test show there is significant relationship between nutritional status with incidence of pneumonia in toddlers ($p < 0.05$). It was concluded that nutritional status play a role important in the incidence of pneumonia in toddlers. Therefore that, intervention nutrition and promotion health need improved for lower number pneumonia incident.

Keywords: Nutritional Status, Pneumonia, Toddlers, Infection Channel Breathing Below, Health Center

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1. Introduction

Pneumonia is inflammation parenchyma lung disease caused by microorganisms like bacteria, viruses, or mushrooms, which are mainly attack children toddlers. Based on WHO data, pneumonia contributes about 15% of all over death toddlers in the world. In Indonesia, pneumonia is still be one of problem health main at level society, especially in the regions with condition social economy low and malnutrition bad.

Poor nutritional status can cause system immune body child become weak, so toddler more prone to caught infection including pneumonia. Malnutrition adequate also inhibits development network and function optimal lungs. Therefore that's important for researching connection between nutritional status and the incidence of pneumonia for support effort prevention and control disease this.

The purpose of study this is for know connection between nutritional status with respiratory tract pneumonia incident breathing lower specifically for toddlers in the work area health center.

2. Research Methods

Study This use cross sectional design with approach quantitative. Research carried out in the work area of one of Health centers in area X in January –March 2025. Population in study This is all over toddler ages 12–59 months who came to Health Center or registered in the monitoring program growth. Sample of 80 toddlers taken use purposive sampling technique with criteria inclusion and exclusion certain.

Variables independent in study This is nutritional status, which is measured use BB/U indicator (body weight according to age) based on WHO standards. Variables dependent is pneumonia incident, diagnosed by a health worker medical based on notes medical or symptom clinical (cough, shortness of breath, fever, retraction chest wall).

Instrument study covering questionnaire identity respondents, forms measurement anthropometry, and pneumonia diagnosis checklist. Data analysis was performed using the Chi-square test with level significance $p < 0.05$.





3. Results And Discussion

a. Results

Of the 80 toddlers studied :

1) Nutritional status :

- a) Good nutrition : 48 toddlers (60%).
- b) Malnutrition : 24 toddlers (30 %).
- c) Malnutrition : 8 toddlers (10 %).

2) Occurrence :

- a) Experiencing pneumonia: 28 toddlers (35%).
- b) No pneumonia : 52 toddlers (65%).
- c) Distribution table show that :
- d) From 8 toddlers with nutrition bad, 7 (87.5%) had pneumonia.

Of 24 toddlers with nutrition less, 14 (58.3%) had pneumonia. Of the 48 toddlers with nutrition well, only 7 (14.6%) experienced pneumonia.

Chi-square statistical test show p value = 0.001 (< 0.05), which means there is significant relationship between nutritional status with the incidence of pneumonia in toddlers.

b. Discussion

Research result this show that the more poor nutritional status toddlers, increasingly tall risk affected by pneumonia. Children with nutrition bad own power stand low body so that more easy infected. System immunity weak body no capable oppose pathogens that enter to in channel breathing.

Study This in line with studies previously which shows that nutrition bad is one of factor risk main incidence of pneumonia in children in developing countries. The lack of intake of protein, vitamin A, and other substances iron can cause system failure immune and slow down the healing process infection.

Required effort promotive and preventive which involves education to Mother toddler about importance fulfillment nutrition, monitoring growth in a way periodically, and immunization complete.





4. Conclusion

This study concluded that there is a significant relationship between nutritional status and the incidence of lower respiratory tract pneumonia specifically in toddlers in the Puskesmas work area. Toddlers with malnutrition have a higher risk of experiencing pneumonia.

- a) Health centers need to improve nutritional education programs for parents of toddlers.
- b) Strengthening the program for monitoring toddler growth and development and preventing disease through immunization and healthy and clean living behavior (PHBS).
- c) Further research with larger sample sizes and other risk factors is recommended to gain a more comprehensive understanding.

5. Compliance with Ethical Standards

Ethical Approval:

Study this has get agreement ethics from Committee Ethics Health Research with number letter agreement.

Informed Consent:

Before data collection was carried out by researchers has give explanation about objectives and procedures study to parents / guardians toddler. Consent written (informed consent) is obtained from every respondents who participated.

Conflict of Interest:

Writer state no there is conflict interest in study this.

Funding:

Study This funded in a way independent by researchers without the existence of sponsors from party wherever.

Data Confidentiality:

All respondent data guarded its confidentiality and only used for interest study.

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