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# The Relationship Between Cadres Knowledge And Motivation With Pneumonia Case Finding In Toddlers At Paal V Public Health Center In Jambi City

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***Abstract***

*Pneumonia remains a leading cause of child mortality globally and in Indonesia. This study aims to analyze the relationship between knowledge and motivation of health cadres and their performance in finding pneumonia cases among toddlers at the Paal V Public Health Center, Jambi City. A quantitative cross-sectional design was employed with 67 female cadres as respondents. Data were collected using questionnaires and analyzed using the Chi-Square test. The results showed no significant relationship between education level and case finding (p = 0.900). However, a significant relationship was found between motivation and pneumonia case finding (p = 0.016). These findings suggest that enhancing cadre motivation is crucial for improving pneumonia detection in the community.*

***Keywords: Pneumonia, Cadres, Knowledge, Motivation, Case Finding, Toddlers.***

## INTRODUCTION

Pneumonia is infection in the part lower channel breathing in particular influence health lungs. Condition This marked with accumulation fluid in the alveoli of the lungs, disrupting exchange oxygen and causes difficulty in breathing. Pneumonia is caused by an infection of the lung tissue. This infection can be caused by various types of microorganisme, including bacteria, viruses, fungi, or other microbes. Common symptoms of pneumonia include shortness of breath, fever, chills, headache, and a cough that produces phlegm.

Pneumonia is a contagious disease, where it can spread through direct contact with sufferers. Generally, pneumonia is experienced by many toddlers, but adults can also be infected, especially the elderly and people with a history of other diseases. The signs and symptoms of pneumonia in toddlers include chest indrawing, oxygen saturation <90%, rapid breathing, additional breath sounds in the form of rhonchi, in addition to being characterized by fever and cough.

Pneumonia becomes disease Infectious diseases are the most significant cause of death in children globally. Each year, an estimated 921,000 children under the age of 5 die from them. Pneumonia. WHO, as reported by Rozi et al. in 2022, reported that pneumonia causes approximately 800,000 to 1 million deaths in children annually. Pneumonia is the most common cause of death in toddlers, surpassing other infectious diseases such as measles, malaria, and AIDS. World Pneumonia Day (WPD), an annual forum to eradicate pneumonia, revealed that Indonesia ranks 6th in the world for pneumonia incidence.

Based on the results The 2023 Indonesian Health Survey (SKI) showed the highest number of pneumonia cases experienced by children, especially in groups under 5 years of age, with number around 26.9%. Meanwhile that , the prevalence of pneumonia in the group age 55-64 years reach number as much as 11%, at the age of 65-74 years amounting to 12.4%, as well as in the group 75 years old to on reached 12.6%.

Increasing pneumonia case detection requires human resources, which are the most crucial element or capital in an organization. This is because human resources play a role in determining the direction and goals of activities, organizational progress, and determining the success of activities undertaken, particularly in pneumonia case detection. However, active human resources are not

limited to health workers; there are also health cadres who assist the Community Health Centers in their respective areas.

Cadres, as extensions of community health centers, have enormous potential because they are closely connected (geographically and socially) to the communities within their own areas. One way cadres can do this is by disseminating information using effective outreach techniques to mothers and families. However, this activity has not been fully implemented due to limited supporting materials and limited knowledge of cadres in pneumonia prevention.

In essence, a role is behavior that relates to who holds a certain position, a position identifies a person's status or place in a social system. The role of cadres is to develop communities recruited from, by, and for the community, which plays a role in helping the smooth running of health services. The existence of cadres is often associated with routine services at Posyandu, so a cadre must be willing to work voluntarily and sincerely in carrying out Posyandu activities and mobilizing the community to participate in Posyandu activities. In the Posyandu program, it will not be successful if there is no community participation, therefore, community participation, especially cadre participation, if implemented properly, will help in increasing Posyandu coverage results.

Health cadres serve as the "spearhead" of community health services, particularly in early screening and referring suspected pneumonia cases to health centers. Despite their importance, detection rates remain low (10.1% of the target in Jambi City). This study investigates whether cadres' knowledge and motivation influence these detection rates.

## LITERATURE REVIEW

Pneumonia is an acute infection or inflammation that affects the alveoli due to pathogenic microorganisms · Disease this also becomes contributor main death toddlers in the world that are contagious. This pneumonia marked with inflammation that is present consolidation because cavities filled with exudate. In normal phenomena when the alveoli are filled air, but there is infection, then reaction inflammation will occurs, so that these alveoli will filled with fluid. This is will happen restrictions from gas exchange in the area consolidation and creation lungs no can in a way maximum working.

Pneumonia is an acute disease in toddlers. with symptoms of chills, fever, headache, cough, phlegm, and shortness of breath caused by various microorganisms such as bacteria, viruses, and fungi. In children suffering from pneumonia, the lungs' ability to expand is reduced, so the body reacts by breathing rapidly to prevent hypoxia (oxygen deficiency).

Pneumonia in infancy has long-term consequences that can manifest in adulthood, including decreased lung function. The incidence of pneumonia in developing countries, including Indonesia, is nearly 30% in children under five years of age, or approximately 10-20 cases per 100 children per year, with a high mortality rate. Pneumonia causes more than 5 million deaths per year in children under five in developing countries.

One of problems in the world of health that have not been resolved Can resolved by the world is pneumonia, because of that That as for what becomes reason or etiology of pneumonia based on his group is as following:

1. Bacteria that include Streptococcus pneumoniae, Pseudomonas aeruginosa, Mycoplasma pneumoniae, Staphylococcus aureus, Klebsilea pneumoniae, Chlamydophila pneumoniae, Clamydia psittac
2. Viruses including Respiratory Synsytial Virus, Influenza, Parainfluenza, Adenovirus
3. Mold which include candidiasis, histoplasmosis, aspergiphosis, coccidioido mycosis, cryptococosis, pneumocystis carinii
4. Inhalation poisons, chemicals, cigarettes, dust, and gases. Various type bacteria , viruses and mold become reason pneumonia and bacterial diseases that are common become the cause of pneumonia

is Streptococcus pneumonia , HiB ( Haemophilus influenza type b ) and staphylococcus (Staphylococcus aureus)

As much as 70% of pneumonia cases are caused by existence bacteria *Streptococcus pneumoniae* as much as 50% and as much as 20% because bacteria *Haemophilus influenzae* , while the virus that causes pneumonia is the most common is *rhinovirus*, *respiratory syncytial virus* (RSV), *influenza virus.* it is said somebody has infected with pneumonia is if initially pathogens enter and the material chemistry through droplets in the air, then happen distribution microorganisms from respiratory tract in the parenchyma.

The risk of lung infection depends on the ability of microorganisms to damage lung tissue. Microorganisms can damage lung tissue in several ways: direct inoculation, spread through the bloodstream, inhalation of aerosols, and colonization of mucosal surfaces. Damage to lung tissue by microorganisms produces toxins that can trigger immune reactions and inflammation.

Respiratory tract infections can cause entire lung lobes to fill with fluid. This fluid results from the body's response to killing pathogens. The fluid can consist of red blood cells or blood plasma that enters through the capillaries, decreasing the ventilation-perfusion ratio and oxygen saturation, resulting in shortness of breath. This reduces the lungs' ability to expand, causing the body to respond with rapid breathing to avoid hypoxia. As the condition worsens, the lungs become stiffer and the lower chest wall becomes indrawn. At this stage, the toddler is already suffering from pneumonia. If hypoxia and sepsis (a generalized infection) occur, it can be fatal.

According to H.L. Bloom's theory in Hayati and Pawenang in 2021, it states that there is four factor correlated determinants One each other for affect the status of health. The determining factor is as much as 40% of the factors environment, 30% behavior, 20% service health and 10% because genetics. Therefore that, health status will be optimal if four factor under optimal conditions and if one from factor the disturbed, then naturally degrees health someone will also disturbed.

The implementation of the pneumonia eradication program requires support from all parties and the active role of the community, including health cadres. Health cadres are volunteers selected by the community and play a role in developing the community, recruited from, by, for the community, cadres can play two roles in the health sector, namely in the integrated health post (posyandu) and outside the posyandu. Cadres are the closest people in the community, who play an important role in mobilizing community participation in health. Health cadres are also volunteers selected by the community and tasked with developing the community, in this case cadres are also called health movers or promoters.

Health cadres are the spearhead of health in rural communities. They are among the closest health partners in the village to mothers of toddlers. There is a need to increase cadres' knowledge and motivation regarding early detection and risk factors for pneumonia in toddlers so they can share their knowledge with mothers and thus prevent pneumonia in toddlers.

In order to make national development, especially in the health sector, a form of health service is based on the principle that society is not an object, but rather a subject of development itself. In essence, health is patterned to follow the active and responsible participation of society. Community participation in increasing service efficiency is based on limited power and the existence of community health service operations that will utilize existing resources in the community as optimally as possible. In an effort to require community participation, the socio-cultural conditions of the community must also be taken into account. So that involving the community in development efforts, especially in the health sector, will not bring good results if the process is through an educational approach, namely trying to raise awareness to be able to solve problems by taking into account local socio-culture. With the formation of health cadres, health services that have been carried out by health workers alone can be assisted by the community. Thus, the community is not only an object of development, but also a partner in development itself. Furthermore, with the existence of cadres, the messages conveyed can

be received perfectly thanks to the existence of cadres, it is clear that the formation of cadres is the formation of cadres is the embodiment of development in the health sector.

Cadres are a vital part of the community. Cadres have several duties, one of which is providing health education to mothers. However, the education and knowledge levels of cadres vary widely, potentially creating gaps in providing health education to the community, particularly in managing children with coughs and difficulty breathing. Cadres need to recognize and observe the early signs of pneumonia and when to seek help and referral to the health care system to prevent their toddler's illness from worsening.

In essence, a role is behavior that relates to who holds a certain position, a position identifies a person's status or place in a social system. The role of cadres is to develop communities recruited from, by, and for the community, which plays a role in helping the smooth running of health services. The existence of cadres is often associated with routine services at Posyandu, so a cadre must be willing to work voluntarily and sincerely in carrying out Posyandu activities and mobilizing the community to participate in Posyandu activities. In the Posyandu program, it will not be successful if there is no community participation, therefore, community participation, especially cadre participation, if implemented properly, will help in increasing Posyandu coverage results.

Based on this, it can be clearly interpreted that the role of cadres in early treatment practices for toddlers with ARI is very important, because if the ARI treatment practices at the family level are lacking/poor, it will affect the course of the disease from mild to more severe. Early detection and intervention of pneumonia is very necessary in critical periods. This can be done through comprehensive coaching activities and requires partnerships from various parties, including families (parents, child caregivers and other family members, professional staff (health, education and social) and the community (cadres of community leaders, professional organizations, non-governmental organization.

Knowledge is the result of knowing, and this occurs after a person senses a particular object. Sensing a particular object occurs through the five human senses: sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. Knowledge is also the result of knowing, and this occurs after a person senses a particular object. Sensing occurs through the five human senses: sight, hearing, smell, taste, and touch. Most human knowledge is acquired through the eyes and ears. Knowledge is a very important domain in shaping a person's actions.

Knowledge encompasses a person's information and understanding of a particular field or topic. It involves both theoretical and practical knowledge. Knowledge can come from formal education, training, and work experience. provide base for taking informational, supportive decisions efficiency and safety on site work, and stimulate development creativity. Combination balanced skills and knowledge become key for increase performance individuals and organizations, as well as for still competitive in the environment dynamic work.

The level of knowledge of cadres in this study is everything that is the result of cadres' perceptions regarding the discovery of pneumonia. The knowledge covered in the cognitive domain has six levels, namely:

1. Awareness (consciousness) where the person is aware in the sense of knowing beforehand about the stimulus (object).
2. Interest (feeling attracted) to the stimulus or object. This is where the subject's attitude begins to emerge.
3. Evaluation (weighing up) whether the stimulus is good or bad for him. This means the respondent's attitude has improved.
4. Trial (trying), where the subject starts trying to do something according to what the stimulus wants.
5. Adoption (accepting), where the subject has behaved in a new way according to his knowledge, awareness and attitude towards the stimulus.

Motive or motivation comes from the Latin word "movere," meaning an inner drive to act or behave. Management experts agree that motivation is a series of efforts to influence the behavior of others by first understanding what drives a person. Here, a person moves for two reasons: ability and motivation. Ability is influenced by habits acquired through experience, education, training, and the biological and psychological reflexes that are inherent to human nature.
Motivation is a person's reasoning for acting to fulfill their needs. This drive and movement manifests itself in behavior. Behavior itself is formed through a specific process and occurs through human interaction with their environment. Based on the definition above, motivation can be defined as a drive originating from within an individual to exert high levels of effort toward a specific goal.

Motivation can also be defined as the difference between being able to do something and being willing to do it. Motivation is more closely related to the desire to carry out a task to achieve a goal. Motivation is a force, either internal or external, that drives someone to achieve a predetermined goal. In other words, motivation is defined as the mental drive within an individual or a member of society. Cadres with low motivation tend to show less activity and conversely cadres with high motivation tend to show good activity too. In Herberg 's Theory gives opinion that There are two influencing factors motivation namely theory hygiene and motivator.

## RESEARCH METHODS

This type of research uses a quantitative research type that analyzes numerical data which is then analyzed statistically, the purpose of which is to test a research hypothesis which provides an overview of the fundamental relationship between quantitative relationships. a cross-sectional study research design where sample measurements are only carried out once at a time with the aim of analyzing the relationship between dependent variables and independent variables.

The entirety of research subjects that have included certain characteristics in a study. The population in this study is all cadres ·integrated health post toddlers at the Paal V Community Health Center in Jambi City, namely a total of 165 cadres. A sample is a portion of a population obtained by using a particular sampling technique, in which determining the sample includes certain criteria that can describe the existing population, which means that the sample used in the research must be very representative because it must describe the existing population.

Taking technique samples used in study This is method non-probability that is not give equal opportunity for all or individual sample selected as sample, with use technique purposive sampling, namely technique determination sample with certain considerations.

Univariate analysis is an analysis technique that only analyzes one variable, which is presented in the form of a story (narrative) and displays a frequency distribution table of the variables contained in the frequency survey of each variable. In this study, the researcher identified the characteristics knowledge cadres and motivation cadres and performance invention pneumonia cases at Community Health Centers in Jambi City.

Bivariate analysis is conducted to consider the nature of two variables, namely the dependent and independent variables, and their relationship to each other. The statistical test used is the chi-square test. The chi-square test is a non-parametric test that has the ability to compare two or more categories of categorized data. In this case, bivariate analysis is conducted to determine the relationship between two variables. between knowledge and motivation cadre to invention pneumonia cases at Community Health Centers in Jambi City.

## RESULTS AND DISCUSSION

The demographic profile of the respondents showed they were all female, with an average age of 44.6 years and a long average work experience of 15.8 years.

**Table 1: Relationship Between Education Level and Pneumonia Case Finding**

| Education Level | Low Case Finding n (%) | High Case Finding n (%) | Total | p-value |
|---|---|---|---|---|
| Low (SD/SMP/SMA) | 32 (53.3%) | 28 (46.7%) | 60 | **0.900** |
| High (College/PT) | 3 (42.9%) | 4 (57.1%) | 7 | |
| **Total** | **35 (52.2%)** | **32 (47.8%)** | **67** | |

The relationship between respondents' education level and case detection categories (low vs. high). Of the 60 respondents with low education, 32 (53.3%) were in the low case detection category, and 28 (46.7%) were in the high category. Of the 7 respondents with high education, 3 (42.9%) were in the low case detection category, and 4 (57.1%) were in the high category. The Chi-Square test yielded a p-value of 0.900 ($p > 0.05$), indicating no significant relationship between education level and case detection among respondents. Although descriptively, the low education group had a 1.524 times greater chance of having low case detection, this finding was not statistically significant.

**Table 2: Relationship Between Motivation and Pneumonia Case Finding**

| Motivation Level | Low Case Finding n (%) | High Case Finding n (%) | Total | p-value |
|---|---|---|---|---|
| High | 21 (70.0%) | 9 (30.0%) | 30 | **0.016** |
| Low | 14 (37.8%) | 23 (62.2%) | 37 | |
| **Total** | **35 (52.2%)** | **32 (47.8%)** | **67** | |

This table shows a contrasting distribution pattern among the 67 respondents, with the low motivation group, with the majority of respondents (62.2%), actually having high case detection rates, while the high motivation group, with the majority of respondents (70.0%), had low case detection rates. The chi-square analysis revealed a significant relationship between motivation and case detection ($p = 0.016$). This finding indicates that motivation level is a factor closely related to the level of case detection by respondents

## DISCUSSION

Education is generally understood as the process of changing the attitudes and behavior of an individual or group in an effort to mature human beings through teaching and training. According to Law No. 20 of 2003, education is a conscious and planned effort to create a learning environment that allows students to actively develop their potential to possess spiritual strength, self-control, personality, intelligence, and skills.

In research statistics, level education often used as indicator ability cognitive. According to Notoatmodjo (2018), level education is one of the influencing factors perception and way think somebody to stimulus or assigned tasks.

- Secondary Education (Primary-High School): Usually associated with greater understanding nature practical and experienced direct.
- Higher Education: Expected own framework think more theoretical, systematic, and analytical in problem solving.

The Odds Ratio value of 1.524 (95% CI: 0.314 – 7.402) shows that mathematically, low education does have a slightly greater chance of low, but because the Confidence Interval (CI) range exceeds 1, this effect is considered statistically insignificant.

Test results statistics show mark Asymptotic Significance (Continuity Correction) is 0.900. Because the p value > 0.05, then concluded that no there is significant relationship between level education with invention pneumonia cases.

Motivation comes from the Latin word "movere," meaning to move. According to Robbins & Judge (2017), motivation is a process that explains an individual's intensity, direction, and persistence in achieving their goals. In a work context, motivation is the psychological drive that causes someone to act to achieve organizational goals while simultaneously fulfilling their personal needs.

- Two Factor Theory (Herzberg): Differentiating between factor Hygiene (salary, policies) company) and factors Motivator (achievement, responsibility) answer). Satisfaction Work or performance invention cases are highly dependent on the presence this motivating factor.
- Theory of Needs (Maslow): States that man act based on hierarchy needs, starting from physique until actualization self.

The *odds ratio* of 0.261 (95% CI: 0.094 – 0.727) confirms this significance. Because the CI range does not exceed 1, the motivation variable is statistically a strong and valid predictor of case detection in this sample.

Continuity Correction test results show p value = 0.016. Since $p < 0.05$, then concluded that there is significant relationship between level motivation with invention case. This means that high low motivation somebody in a way real influence achievements invention their pneumonia cases.

The analysis can be revealed that formal education level does not significantly correlate with the ability of cadres to find pneumonia cases ($p = 0.900$). This suggests that practical experience and specific health training may be more influential than formal academic background.

Conversely, motivation showed a strong significant relationship with case finding ($p = 0.016$). Cadres with higher psychological drive-stemming from factors like responsibility and recognition-showed better performance in community detection. This aligns with Herzberg's Two-Factor Theory, where motivators like achievement and responsibility directly affect job performance.

## CONCLUSION

1. Respondent Characteristics: All respondents were female with an average adult age (44.63 years) and had relatively senior work experience (average 15.81 years). Most respondents had a secondary or lower educational background.
2. Gender Variable: A correlation test could not be conducted because the entire sample was female (homogeneous). This indicates that gender is not a differentiating variable in this study.
3. Education Variable: There was no significant relationship between education level and pneumonia case detection with a p- *value* ($p = 0.900$). This proves that formal educational background does not determine the high or low rate of pneumonia case detection in respondents.

Motivation Variable: There is a statistically significant relationship between motivation and the category of pneumonia case detection with a p- *value* ($p = 0.016$). Respondents with high motivation have a greater tendency to have pneumonia case detection.

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