

THE CORRELATION BETWEEN PARENT'S KNOWLEDGE LEVEL AND ANTIBIOTIC USE IN TODDLERS ACUTE RESPIRATORY INFECTION (ARI) IN BUNTOK PUBLIC HEALTH CENTER

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Abstract

The problem of toddlers has tended to increase in recent decades, both globally and nationally. The high prevalence of toddler and its impact has resulted in the high consumption of antibiotics. The lack of knowledge on antibiotics tends to lead to inappropriate use of antibiotics. The purpose of this study is to analyze the correlation between the level of parental knowledge and the use of antibiotics in toddlers with ARI in the Buntok Public Health Center. Research in the Buntok Public Health Center in August 2020. The type of research was analytic survey with cross sectional approach. Population and sample were parents of toddlers diagnosed with ARI and receiving antibiotic therapy at Buntok Public Health Center. The sample part of the population was 30 people with accidental sampling technique. The instrument was a questionnaire using the google form method. Data analysis using spearman rank. Most of the parents of toddlers with ARI had less knowledge about antibiotics as many as 17 people (56.6%) and most of the use of antibiotics was in the moderate category, 23 people (76.7%). There is a correlation between parental knowledge and the use of antibiotics in children with ARI in the area of Buntok Public Health Center (p value = 0.000). Buntok Public Health Center can improve health education, for example by distributing leaflets about ARIs and the use of ARI antibiotics.

Keywords: Knowledge, Behavior Use of Antibiotics, ARI.

1. Introduction

Acute respiratory infections (ARI) are infections that start from the upper respiratory tract to the lungs that last up to 14 days (Maryunani, 2014). ARI is a major cause of infectious disease morbidity and mortality in the world. The mortality rate for ARI reaches 4.25 million every year in the world (Najmah, 2016). Data Basic Health Research (Riskesdas) in 2018 based on the diagnosis of health workers, the prevalence of ARI in toddler in Indonesia is 12.8%. The province with the highest ARI in toddler was East Nusa Tenggara Province at 18.6% and the lowest was in North Sulawesi Province at 6.2%, in South Kalimantan Province at 7.2% while in Central Kalimantan Province at 15.1% (Kemenkes RI, 2018). The high prevalence of ARI disease and the impact it causes at high

consumption of over-the-counter drugs (such as anti-influenza, cough medicine, multivitamin) and antibiotics. Antibiotics are widely prescribed to treat this infection. One of the reasons is expectations clinicians overreact to antibiotics especially to prevent secondary infection caused by bacteria, which is not can be prevented. The impact of all this is increased bacterial resistance and an increase in unwanted side effects (Sugiarti, 2014). Treatment using antibiotics for ARI caused by bacteria, antiviral treatment for influenza, for children infected with HIV, antibiotic treatment (Najmah, 2016). Treatment of ARI in toddlers mostly uses antibiotics because the cause of ARI disease itself is a virus or bacteria. Antibiotics are the mainstay of therapy, in addition to adjunctive therapy such as paracetamol. The type of antibiotic that is often used for the treatment of ARI is amoxicillin. This type of antibiotic has many advantages including the taste of antibiotics that can be accepted by toddlers, safe, more effective, cheaper prices, and is a narrow-spectrum antibiotic, besides that the cross-reactivity between penicillin and second and third-generation cephalosporin antibiotics is low, which is less than 10-15% (Nisa, 2017). South Barito Health Office, ARI is the first most common disease with a total of 12,848 sufferers (Uriutu, 2020). Data from the Buntok Health Center in 2019 the number of ARI patients was 1,422 people. A preliminary study conducted on 17-24 June 2020 to 5 mothers whose children had ARI as many as 1 (10%) mothers said that knowing the impact if they stopped taking antibiotic drugs before they ran out, namely viruses or bacteria that cause children's illnesses became immune while 4 people (40%) of mothers said that they did not know the impact if the use of antibiotics that had been given by the doctor was not spent. Based on the description above, the writer is interested in conducting a study entitled "The Correlation between Parents' Knowledge Levels on Antibiotic Use Behavior in Toddlers with ARI in the Buntok Public Health Center".

2. Materials and Methods

This research was conducted in the area of Buntok Public Health Center in August 2020. The targets of this study were parents and toddlers of ARI patients in the area of Buntok Public Health Center. This research method is a type of analytical survey research with a cross-sectional design. The population and sample in this study were parents of toddlers who were diagnosed with ARI and received antibiotic therapy at the Buntok Public Health Center as many as 30 people. Sampling in this study using an accidental sampling technique. The independent variable in this study is the level of knowledge of parents while the dependent variable is the behavior of use antibiotics ARI toddlers. The type of data used is quantitative data. The instrument used in this study was a questionnaire with the google form method to measure the level of knowledge of parents and the behavior of using antibiotics in toddlers with ARI at the Buntok Public Health Center. Data analysis using Spearman Rank test.

3. Results and Discussion

1. Characteristics of respondents

Education level of parents of toddlers with ARI in the Buntok Public Health Center:

Table 1: Distribution of the Education Level Frequency of Parents Toddler ARI in the Buntok Health Center area in 2020

No.	Level of education	Frequency (n)	Percentage (%)
1	College	3	10
2	Senior High School	5	16.7
3	Junior High School	14	46.7
4	Elementary School	8	26.7
Amount		30	100

Table 1 shows that the parents of toddlers with ARI in the Buntok Health Center area mostly have a junior high school education level (SMP), which is as many as 14 people (46.7%). This data shows that the education level of mothers under five is still dominated by low levels of education and has not been following the expectations of the government. Women tend not to have a high education because there is still a community culture that emphasizes that the main task of women is only to take care of the household without having to have a high level of education (Primary Data, 2020). The occupation of parents of children under five with respiratory infection in the Buntok Health Center area :

Table 2: Distributin of the Work Frequency of Parents Toddlers ARI in The Working Area of The Buntok Public Health Center 2020

No.	Work	Frequency (n)	Percentage (%)
1.	Work	7	23.3
2.	Does not Work	23	76.7
Amount		30	100

Table 2 shows that the parents of toddlers with ARI in the Buntok Public Health Center are mostly not working (housewives) as many as 23 people (76.7%). This data shows that there are still many mothers of toddlers who choose not to work. This can be due to the low level of education of mothers, which hampers the ability of mothers to get jobs, besides that there are many benefits to being a housewife rather than having work outside the home. There are several reasons why mothers of toddlers usually choose to become housewives, including that they can have more flexible time for the family, the income from the husband is able to meet the needs of the family, there are demands from the family to stop working and so on (Primary Data, 2020).

2. Univariate analysis

Parental knowledge of ARI toddlers about antibiotics in the Buntok Public Health Center :

Table 3: Frequency Distribution of Parental Toddler ARI Knowledge about Antibiotics in the Buntok Public Health Center 2020

No.	Parental Knowledge	Frequency (n)	Percentage (%)
1	Well	5	16.7
2	Enough	8	26.7
3	Not enough	17	56.6
Amount		30	100

Table 3 shows that parents of toddlers with ARI in the Buntok Public Health Center mostly have less knowledge about antibiotics, as many as 17 people (56.6%). This lack of knowledge can be seen from the number of respondents who answered incorrectly on each question given. Questions that many respondents do not know are numbers 1, 2, and 7. This shows that many respondents do not know that antibiotics are drugs for infectious diseases, many respondents do not know that the actual amount of medicine consumed should not be reduced even though the child's condition has been reduced, improving, and many respondents also do not know that antibiotics should not be traded freely without a doctor's prescription (Primary Data, 2020).

The behavior of using antibiotics in toddlers with ARI in the Buntok Public Health Center:

Table 4: Frequency Distribution of Antibiotic Use Behavior in Toddlers with ARI in the Buntok Public Health Center 2020

No.	Antibiotic Use Behavior	Frequency (n)	Percentage (%)
1	Well	4	13.3
2	Enough	23	76.7
3	Not enough	3	10
Amount		30	100

Table 4 shows that the behavior of using antibiotics in toddlers with respiratory infections in the Buntok Public Health Center is mostly in the fairly good category, with as many as 23 people (76.7%). The behavior of using antibiotics that are quite good can be seen from the lowest scores of respondents answers, namely numbers 2, 3, and 7. This shows that parents of toddlers have bought children's antibiotic drugs without a doctor's prescription and gave them to sick children without a doctor's prescription. Many parents of toddlers stated that they had stored antibiotic drugs and used them again when their child had a relapse (Primary Data, 2020).

3. Bivariate Analysis

Table 5: Correlation between Parental Knowledge and antibiotic Use Behavior in Toddlers ARI in the Buntok Public Health Center 2020

No.	Parental Knowledge	Behavior Use of Antibiotics						Amount	
		Well		Enough		Not enough			
		n	%	n	%	n	%	n	%
1	Well	4	80	1	20	0	0	5	100
2	Enough	0	0	8	100	0	0	8	100
3	Not enough	0	0	14	82.4	3	17.6	17	100
Amount		4	13.3	23	76.7	3	10	30	100
p value = 0.000									

Table 5 shows that of the 5 parents who have good knowledge about antibiotics, most of them have good behavior in using antibiotics in toddlers with ARI, from 8 parents who have sufficient knowledge about antibiotics all use antibiotics in toddlers with sufficient category while from 17 parents Those who have less knowledge about antibiotics mostly use antibiotics in children with ARI insufficient category (Primary Data, 2020). The results of the Spearman Rank statistical test obtained $p = 0.000$, so $p < \alpha$, it can be concluded that H_0 is rejected and H_a is accepted, meaning that there is a relationship between parental knowledge and antibiotic use behavior in ARI toddlers in the Buntok Health Center area (Primary Data, 2020).

Discussion

The results of the study showed that there was a relationship between parental knowledge and the behavior of using antibiotics in with ARI in the working area of the Buntok Public Health Center toddlers. The results of this study have proven that the behavior of using antibiotics in children with ARI is influenced by the level of knowledge of parents about antibiotics. Respondent's lack of knowledge means that they have not been able to know, do not understand, and do not understand the use of ARI antibiotics correctly. Lack of knowledge will be less motivating respondents to use drugs properly and correctly. Someone who already knows a lot about ARI antibiotic drugs will make it easier for respondents to carry out treatment for toddlers with ARI independently. Lack of knowledge about ARI antibiotic drugs causes respondents to think that ARI antibiotic drugs are less important and will be consumed in vain so that respondents do not appear interested in consuming ARI antibiotic drugs properly. Knowledge of ARI treatment, especially antibiotics that must be consumed, is needed for mothers of toddlers who experience ARI to independently carry out all forms of treatment efforts

to achieve optimal healing, the better the respondent's knowledge of ARI antibiotic drugs, the better the respondent's practice in ARI antibiotics so that toddlers can get well soon.

Based on the results of the study, it can be explained that the less knowledge of mothers, the less good they are in using antibiotics for toddlers with ARI. The behavior of using ARI antibiotics is influenced by a person's knowledge because this knowledge will be the starting point for behavior change, which in turn will change the mother's behavior and increase compliance in using antibiotic drugs correctly. This study also can be used as a basis for the importance of increasing knowledge about the use of antibiotics, especially antibiotics for toddlers with ARI, which can be done with programmed counseling to the community, especially to mothers who have toddlers. The aim is not just to know but to motivate mothers of toddlers to want to use antibiotics properly and correctly.

Knowledge or cognition is an important domain for the formation of one's actions. Behavior that is based on knowledge will be better than behavior that is not based on knowledge (Notoatmodjo, 2012). Knowledge of parents is very influential on the use of drugs. The higher the knowledge of parents about drugs and their use, the better in providing drug knowledge to children. This clearly explains that the higher the knowledge of parents, the better the use of drugs (Sofyan, 2018). The results of this study are in line with the results of Roziana's research (2019) which found that there was a relationship between mother's knowledge about the use of antibiotics with medication adherence in ARI patients at the Pediatric Outpatient Clinic of RSI PKU Muhammadiyah Pekajangan, Pekalongan Regency (p-value = 0.021).

Conclusion

Based on the results and discussion, it can be concluded as follows:

Most of the parents of children under five with ARI in the Buntok Public Health Center had less knowledge about antibiotics, as many as 17 people (56.7%). The behavior of using antibiotics for ARI under five in the Buntok Public Health Center was mostly in the sufficient category, namely 23 people (76.7%). There is a relationship between parental knowledge and the behavior of using antibiotics in children with ARI in the Buntok Health Center area (p-value = 0.000)

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