
Level Of Parent Education To Knowledge About Antibiotic In Children Ages 0 – 12 Years Old In Tanjungmojo Village, Kangkung District, Kendal Regency

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Abstract

Prescribing antibiotics for infectious diseases that are quite high and less wise will increase the incidence of resistance. Research objectives to determine the influence of parental education level on the knowledge of antibiotic use in children aged 0-12 years in Tanjungmojo Village, Kangkung District, Kendal Regency. The study used observational analytics with a cross sectional approach. The population in this study was all parents who had children aged 0-12 years in Tanjungmojo Kidul Village. The sampling technique used is purposive sampling of 55 respondents who have met the criteria of inclusion and exclusion. Education level data and further knowledge levels analyzed with Chi-Square test. Chi-Square test results between education level and knowledge level obtained $p = 0.006$. This shows a p value of less than 0.05 with a confidence level of 95% so there is a significant relationship between the level of education and the level of knowledge about antibiotics. There is a relationship of parents' education level to knowledge about antibiotics in children aged 0-12 years in Tanjungmojo Village Kangkung district of Kendal regency.

Keyword: Parents' education level, Knowledge of Antibiotics, Children aged 0-12 years.

INTRODUCTION

Infectious diseases are included in the ten most common diseases in Indonesia. Prescribing antibiotics that are high enough and not wise will increase the incidence of resistance. Resistance is the ability of bacteria to neutralize and weaken the action of antibiotics (Kemenkes 2011a). Knowledge about antibiotic resistance in the community has always been very low. According to research conducted by the *World Health Organization* (WHO) from 12 countries including Indonesia, 53-62% stopped taking antibiotics when they recovered. *The World Health Organization* (WHO) coordinates a global campaign to increase public knowledge and awareness of antibiotics because antibiotic resistance is currently the biggest threat to global public health (WHO 2015).

The high use of inappropriate antibiotics in the community causes resistance problems. The results of the *Antimicrobial Resistant in Indonesia* (AMRIN- Study) research proved that from 2494 individuals in the community, 43% *Escherichia coli* were resistant to various types of antibiotics, including: ampicillin (34%), cotrimoxazole (29%) and chloramphenicol (25%).

The results of the study of 781 patients who were hospitalized found that 81% *Escherichia coli* resistant to various types of antibiotics, namely ampicillin (73%), cotrimoxazole (56%), chloramphenicol (43%), ciprofloxacin (22%), and gentamicin (18%). (Ministry of Health 2011b).

Nationally, 27.8% of households store antibiotics and 35.7% store hard drugs. As many as 86.0% of households keep antibiotics without a prescription. In Central Java Province, the proportion of households storing antibiotics without a prescription is quite high, namely 87.1%. Households that store leftover drugs are those who get drugs from a doctor's prescription or leftover drugs from previous uses that are not used up. Nationally, households that store leftover drugs are 47.0% and this is higher than households that store drugs for stock (42.2%) (Ministry of Health 2013).

The results of research conducted in Anjir Mambulau Tengah Village revealed that the level of knowledge of people aged 18-60 years on the use of antibiotics was included in the category of poor knowledge level with a percentage value of 34.50% (Pratomo and Dewi 2018). These results are different from the research in Buntu Sugi Village, Alla' District, Enrekang Regency, the overall

level of public knowledge about the use of antibiotics is in the high category (62%). The level of knowledge about antibiotics in people with basic education levels (SD and SMP) is 57.3%, for people with secondary education levels (SMA) it is 66.7% and for higher education levels (D3/S1/S2/S3) is 61.8%. This shows that most of the people of Buntu Sugi Sub-district already know how to use the right antibiotic behavior because in that village there has been health counseling about antibiotics (Sapirdin et al. 2017).

RESEARCH METHODS

Research Design

The research design used in this study was an analytical observational study with a cross sectional approach. Cross sectional is a study to study the dynamics of the correlation between risk factors and effects, by approaching, observing, or collecting data all at once (Notoatmodjo 2018).

Location and Time of Research

1. Research Location

The location of this research was carried out in Tanjungmojo Kidul Village, Kaliwungu District, Kendal Regency.

2. Research Time

The research period starts from April to June 2021.

Population and Sample

1. Population is the whole object of research. The population of this study was 124 parents who have children aged 0-12 years in the village of Kararangtengah Kidul, Kaliwungu district, Kendal district.

2. The sample in this study were parents in Tanjungmojo Kidul Village who had several criteria, as follows:

a. Inclusion Criteria

- 1) Parents who have children aged 0-12 years.
- 2) Registered as a resident of Tanjungmojo Village.
- 3) Willing to be a respondent.

b. Exclusion Criteria

- 1) Parents who do not have children aged 0-12 years
- 2) Not registered as a resident of Tanjungmojo Village

The number of samples in this study can be calculated using the Slovin formula, it can be seen in equation 1, while how to calculate the sample if it is known that the total population is 124 in equation 2.

$$n = \frac{N}{1 + N(d^2)} \dots \dots \dots \text{equation 1}$$

Information:

n: Number of samples

N: Total population (124)

d: Significance level (10%)

$$n = \frac{N}{1 + N(d^2)} \dots \dots \dots \text{equation 2}$$

$$n = \frac{124}{1 + 124(0,1^2)}$$

$$n = \frac{124}{1 + 124(0,01)}$$

$$n = \frac{124}{2,24}$$

$$n = 55 \text{ orang}$$

Based on the results of the calculations above, it takes 55 parents who have children aged 0-12 years who are selected based on existing considerations from the population.

- c. Sampling technique is a technique used for sampling. The technique used in this research is purposive sampling. Purposive sampling is based on certain considerations made by the researchers themselves, namely taking respondents from parents who have children aged 0-12 years in Tanjungmojo Village.

Research Variables

Variables are things that are the object of research, which are looked at in a research activity, which show variations both quantitatively and qualitatively (Arikunto 2013).

1. Independent Variable

The independent variable is the variable that affects or is the cause of the change or the emergence of the dependent (bound) variable. The independent variable of this research is the education level of parents in Tanjungmojo Village.

2. Bound Variable

The dependent variable is the variable that is affected or becomes the result, because of the independent variable. The dependent variable of this study is the knowledge of parents in the use of antibiotics in children aged 0-12 years in Tanjungmojo Village.

Research Flow

1. Data Collection Permission

Permission for data collection is carried out with the following steps:

- a. The researcher submitted an application for a research permit to the Kendal STIKes institution.
- b. The researcher applied for a permit to the Kesbangpol (Office of National Unity and Politics) Kendal Regency.
- c. Researchers to Baperlitbang to apply for a research permit in Tanjungmojo Village, Kangkung District, Kendal Regency.
- d. The researcher applied for a research permit from the Baperlitbang office to Tanjungmojo Village.

2. Data collection is carried out with the following steps.

- a. Researchers conducted research in Tanjungmojo Village.
- b. Researchers conducted research by visiting respondents who had been determined and distributing questionnaire sheets along with consent forms to become respondents.
- c. The researcher explains the aims and objectives of the research. Then the researcher gave the approval sheet and the application to become a respondent to the prospective respondent.
- d. The researcher distributed questionnaire sheets which were filled in at the same time by the respondents. Researchers conducted research and data collection by assisting respondents in filling out questionnaire sheets with the aim of avoiding data damage.
- e. Followed by questionnaires filled out by the respondents, then the researchers collected the questionnaires and checked the completeness of the answers in the questionnaire. If the answer is not complete, the questionnaire is returned to the respondent to be completed.

Research Instruments

Instrument is a tool used at the time of research to collect data. The instrument used in this study was a questionnaire. Questionnaires are written questions to obtain information from respondents regarding personal reports. The questionnaire in this study was in the form of a check list where the respondents just had to put a check mark (√) in the available column (Arikunto 2013).

RESULTS AND DISCUSSION

Characteristics of Respondents

Variable	Total (N=55)	Presentase (%)
age		
18-35 years	30	54,5
36-55 years	25	45,5
	55	100
Last education		
SD	5	9,1
Junior high school	16	29,1
Senior high school	26	47,3
college	8	14,5
	55	100
Work		
Doesn't work	22	40
trader	5	9
employee	9	16,3
Self employed	8	14,5
laborer	6	10,9
teacher	1	1,8
other	4	7,3
	55	100

Information :

Not Working = Housewife (IRT)

The relationship between education level and knowledge of antibiotics

education	knowledge		Total	P- value	connection p<0,05
	low	high			
SD – junior high school	12	7	19	0,006	relate
Senior high school - college	9	27	36		
Total	21	34	55		

Based on the table of respondents' characteristics by age, it can be seen that the majority of respondents have an age range of 18-35 years with the highest percentage of 54.5%, while respondents with an age range of 36-55 years has the lowest percentage of 45.5%. This is comparable to research (Angelina and Tjandra, 2019) conducted on women from the Tomang village, with the highest percentage of 48.5% in the age range of 31-40 years. In another study by (Nasif et al. 2021), which was conducted on the Nagari Anam Suku community, the highest percentage was 27.1% in the age range of 36-45 years. Research from (Cindy, Murthi, and Artini 2018), in the North Denpasar II Public Health Center, with the highest percentage of 46.9% in

the 26-45 year age range. The results of several studies above show that the majority of antibiotic users are in the productive age range. According to (BPS 2021) the productive age range is between 15-65 years. This is because respondents with productive age have quite a lot of experience in the use of antibiotics.

Based on the table of respondents' characteristics by occupation, it can be seen that the respondents with the highest percentage of 40% were unemployed, while the lowest percentage of 1.8% were teachers. Other occupations are traders, employees, entrepreneurs, and laborers with the respective percentages of 9%, 16.3%, 14.5%, and 10.9%. This study shows that the majority of respondents in Tanjungmojo Village do not work in other words, namely as IRT. This research is in line with research from (Yus Wanita et al. 2019), in Salatiga City which shows that most of the respondents' jobs are as domestic workers with a percentage of 30%. Another study by (Angelina and Tjandra 2019), in the Tomang village, showed that the majority of respondents' jobs were household workers with a percentage of 87.7%. In several studies in the community and the community of mothers, the majority of respondents' occupations are housewives. This is also due to the collection of questionnaires carried out in the morning until noon during working hours.

Based on the table of characteristics of respondents based on education level, it can be seen that respondents with a high school education have the highest percentage, namely 47.3%, while respondents with an elementary school education have the lowest percentage, which is 9.1%. The results of this study indicate that the majority of respondents in Tanjungmojo Village have the latest high school education. This is in line with studies (Dewi and Farida, 2018) in Karanganyar showing that the majority of respondents' education is high school with a percentage of 38.8%. Research by (Angelina and Tjandra 2019) in Tomang Village shows that the education of the most respondents is high school with a percentage of 51.5%. Another study by (Nasif et al. 2021) on the Nagari community showed that the majority of respondents' education was high school with a percentage of 46.9%. The results of some of these studies show that the majority of respondents using antibiotics have high school education. This is because the higher the level of education, the higher the level of knowledge (Notoatmodjo 2003).

After the Chi-square test, a significant value was obtained for the influence of the education factor with a knowledge level of 0.006, which means a significance <0.05 with a 95% confidence level so that there is a significant relationship between the level of education and the level of knowledge in the use of antibiotics. This is in line with research conducted (Yus Wanita et al. 2019) in Sidorejo Kidul Village that the higher a person's education level, the higher his level of knowledge in the use of antibiotics. Another study by (Ivoryanto, Sidharta, and Illahi 2017) that the value of the correlation coefficient between the level of formal education and the level of knowledge in the use of antibiotics includes a high positive correlation. This is in line with (Notoatmodjo 2003) that the higher a person's level of education the higher the level of knowledge. In general, someone with higher education will have broader knowledge than someone with low education

CONCLUSION

From this study, it can be concluded that:

1. The majority of parents' education level in Tanjungmojo Village, Kangkung District, Kendal Regency has a high school education with a percentage of 47.3%.
2. Respondents in Tanjungmojo Village have a high level of knowledge of 65.5%, while a low level of knowledge of 34.5%.
3. There is a relationship between the level of parental education and the level of knowledge about antibiotics. This can be seen from the significant relationship between the level of education and the level of knowledge, namely $p < 0.05$ with a 95% confidence level.

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