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The Relationship between Dagusibu's Knowledge Level and Understanding of Antibiotic Use in the Community in North Denpasar District

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Abstract
85.9% of urban and rural communities do not have proper knowledge about medicines. This causes problems related to the use of drugs, one of which is antibiotics, which will cause antibiotic resistance. Resistance is the greatest threat facing the world, causing more deaths than cancer. Southeast Asia has the highest number of such cases in the world. Knowing the relationship between DAGUSIBU knowledge level and understanding of the use of antibiotics in the community in North Denpasar District. This research is a quantitative observational study with a cross sectional design. sampling using the method (Non-Probability Sampling) with a purposive sampling technique, as many as 400 respondents, with an age range of 17-64 years. The instrument used is a knowledge and understanding questionnaire that has been tested for validity and reliability. The data obtained were analyzed with SPSS with the Spearman rank method. Level of knowledge classified as high 64%, low 35.8%. Understanding of the use of antibiotics classified as understanding 52.3% and not understanding 47.8%. The results of the Rank Spearman correlation test show a correlation coefficient of 0.582 with a significance value of 0.001 (p <0.05), meaning that there is a significant relationship with a fairly strong correlation coefficient. There is a fairly strong and positive or unidirectional relationship between the knowledge level of DAGUSIBU and the understanding of the use of antibiotics in the community in North Denpasar District.
Key Words: *DAGUSIBU, antibiotics, resistance, knowledge, understanding*

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Introduction

According to the World Health Organization (WHO), health can be interpreted as a healthy body condition, both mentally and physically, not only a condition that is free from disease or disability, so that a person can be active socially and economically. One effort to improve health is by using drugs appropriately through DAGUSIBU (Lingga et al., 2021).

In practice, the implementation of DAGUSIBU is greatly influenced by the knowledge and behavioral attitudes of the community. Knowledge in using DAGUSIBU drugs is the most important thing because knowledge is one way to use drugs, store, obtain, and dispose of drugs according to the DAGUSIBU concept (Puspasari et al., 2018).

Based on Basic Health Research (2013), it was shown that 85.9% of urban and rural communities did not have the right knowledge about drugs (Andi Zulbayu et al., 2021). Antibiotics are drugs that are widely prescribed to patients, but their use is often inappropriate, resulting in increased bacterial resistance to antibiotics (Puspasari et al., 2018).

Antibiotic resistance is perhaps the biggest threat facing the world, potentially causing more deaths than cancer. The WHO report states that globally, the death rate from antibiotic resistance in 2013 was 700,000/year, and it is predicted that by 2050 the death rate from antibiotic resistance will be 10,000,000/year (Ayu and Widowati, 2021).

The report from the World Health Organization (WHO) in Antimicrobial Resistance: Global Report on Surveillance also shows that Southeast Asia has the highest number of antibiotic resistance cases in the world (Lia Yunita et al., 2021). Based on RISKESDAS data (2013) in Bali Province, the use of antibiotics without a prescription was recorded at 87.1%,

and the Denpasar city area recorded antibiotic use of 84,7 % with the amount of antibiotic use carried out without a doctor's prescription as much as 49% where the antibiotics were obtained from pharmacies. The relationship between knowledge about DAGUSIBU and understanding of antibiotic use, namely knowledge and understanding in practice related to DAGUSIBU drugs will affect the benefits of the drugs used, so that the drugs used can provide benefits, it is necessary to pay attention to the rational use of drugs including appropriate indications of disease, dosage, method of administration, time interval of administration, duration of administration, alertness to side effects, information, especially in understanding the proper use of antibiotics. Based on the importance of knowledge and understanding in practice related to DAGUSIBU, it is hoped that the community can have knowledge and understanding of good practices in order to use quality, beneficial and quality drugs and there needs to be activities to help the community to better understand drugs and prevent resistance due to inappropriate use of antibiotics (Auriantini, 2020).

Research methods

This research design is a quantitative observational study with a cross-sectional design. The observational quantitative research paper does not provide treatment or intervention to the sample. Analytical observational quantitative research with a cross-sectional design studies the dynamics of the correlation between risk factors and effects, using an observational approach or data collection. Cross-sectional research only observes once, and measurements are made on the subject variables in the study (Notoatmojo, 2010).

The sampling technique used was non-random sampling (non-probability sampling), and the sampling technique used was purposive sampling. Purposive sampling is a sampling technique based on specific criteria predetermined by the researcher (Sugiyono, 2017). Respondents in this study were residents of North Denpasar District aged 17-64 years, who had used antibiotics and were familiar with DAGUSIBU, and agreed to participate in this study by completing a questionnaire. A total of 400 respondents participated.

The instrument used in this study was a questionnaire. The questionnaire in this study was divided into 3 parts including questions about respondents' personal data, questions related to respondents' level of knowledge regarding DAGUSIBU drugs, and questions about understanding the use of antibiotics that had been tested for validity and reliability. Categorization using the median. The assessment will be carried out using a Likert Scale, for the level of knowledge where answers in the correct category will be given a value of 2, if the answer is in the wrong category it is given a value of 0, and if answering "don't know" is considered an answer in the wrong category and is given a value of 1. The answer categories regarding understanding the use of antibiotics with answers always, often, sometimes, and never with a value scale of 4-1. Answer choices with a score of 4 are different for each statement, depending on each question itself. The data obtained were analyzed using SPSS using the Spearman Rank method.

Research Results

Based on the results of the research that has been conducted, the demographic data of respondents from the North Denpasar District community obtained include age, gender, education, occupation, and other questions.

Table 1. Respondent Characteristics

No.	Respondent Characteristics		Frekuensi (f)	Persentase (%)
1.	Gender	Man	148	37%
		Woman	252	63%
		17-25 year	88	22%

2.	Age	26-35 year	120	30%
		36-45 year	78	19,5%
		46-55 year	66	16,5%
		> 56 year	48	12%
3.	Education	College	116	29%
		Senior High School/Vocational High School/Equivalent	183	45,8%
		Junior High School/Equivalent	51	12,8%
		No School/Elementary School	50	12,5%
4.	Work	Working	216	54%
		Not Working	184	46%
5.	Are the complaints you are experiencing that require you to take antibiotics?	Cough	24	6%
		Fever	188	47%
		Open Wounds	24	6%
		Colds	32	8%
		Sore Throat	24	6%
		Toothache	32	8%
		Headache	76	19%
6.	Where do you get antibiotics?	Pharmacy	340	85%
		Drug Store	60	15%
7.	a doctor's prescription?	No	55	13,8%
		Yes, with a doctor's prescription	345	86,3%
8.	leftover antibiotics?	Pernah	52	13%
		Tidak Pernah	348	87%

Did you buy antibiotics with
Have you ever used or given

Based on table 1, the dominant respondents were female with a total of 252 or 63%. In terms of age, the dominant respondents were in the age range of 26-35 years as many as 120 or 30%, and the dominant respondents had the last education up to high school / vocational school / equivalent as many as 183 or 45.8%. Respondents in this study predominantly worked with a total of 216 or 54%. Respondents in this study got antibiotics at pharmacies (85%) and drug stores (15%). The complaints experienced so that they had to take antibiotics were predominantly fever as many as 188 or 47%. Respondents bought antibiotics with a prescription as many as 345 or 86.3% and never used / gave leftover antibiotics as many as 348 respondents or 87%.

	STATEMENT	FREQUENCY		
		Correct %)	Wrong(%)	Don't know (%)
	bought in shops/supermarkets.			
4	Antibiotic drugs can be obtained from friends who have the same disease.	271 (67,8%)	74 (32%)	55 (13,8%)
5	Antibiotic drugs can be obtained from family members who have the same disease.	273 (68,3%)	71 (17,8%)	56 (14 %)
6	Using antibiotics 3 times a day means the medicine is taken 8 hours apart.	289 (72,3%)	58 (14,5%)	53 (13,3%)
7	If you forget to take your medicine, you should take two doses at once	115 (28,7%)	178 (44,5%)	107 (26,8%)
8	Antibiotics are used for infections	302 (75,5%)	68 (17 %)	30 (7,5%)
9	Antibiotics must be taken until finished	237 (59,3%)	110 (27,5%)	53 (13,3 %)
10	An example of a disease that can be treated with antibiotics is Dengue Hemorrhagic Fever (DHF)	247 (61,8%)	88 (22 %)	65 (16,3 %)
11	If you store medicine at home, each medicine must be stored in a place that is not exposed to direct sunlight	341 (85,3%)	37 (9,3%)	22 (5,5%)
12	The purpose of storing medicine properly is to avoid damage to the medicine and keep it out of reach of children.	247 (61,8%)	101 (25,3%)	52 (13%)
13	Tablet medicine is stored at a cold temperature of 2-8°C	252 (63%)	101 (25,3%)	47 (11,8 %)
14	Medicine can be stored not in its original packaging.	258 (64,5%)	86 (21,5%)	56 (14%)
15	Antibiotics can be stored and reused when they recur	337 (84,3%)	41 (10,3%)	22 (5,5%)
16	Damaged/expired medicine should be	289 (72,3%)	75 (18,8%)	36 (9%)

17	Tablet medicine can be thrown away directly in the trash	249 (62,3%)	114	37 (9,3 %)
18	The contents of the medicine do not need to be removed from the packaging when it is to be thrown away.	63 (15,8%)	280 (70%)	57 (14,3%)
	The label on the			8 (2%)

Based on the research results in table 2, it shows that out of 20 statements on the level of knowledge, the majority of respondents answered correctly to question number 19 "The label of the antibiotic container to be discarded must be removed first" which is 90.8%, for the question that was most often answered incorrectly at number 18 "The contents of the drug do not need to be removed from the packaging when it is to be discarded" which is 70%, and for the question that was most often answered did not know at number 7 "If you forget to take the drug, the drug must be taken in two doses at once" which is 26.8%

Table 3. Knowledge Level Categories

CATEGORY	FREQUENCY	
	AMOUNT	**PERSENTASE (%)**
High	257	64,3%
Low	143	35,8%

Berdasarkan hasil penelitian pada tabel 3 menunjukan bahwa mayoritas masyarakat Kecamatan Denpasar Utara memiliki tingkat pengetahuan tinggi yaitu 257 responden atau 64,3%.

Tabel 4. Pemahaman Penggunaan Antibiotik

NO	STATEMENT	**FREKUENSI (%)**			
		Always	**Often**	**Sometimes**	**Sometimes**
1	I always use antibiotics when I have an infection	64 (16%)	61 (15,3%)	243 (60,8%)	32 (8%)
2		127 (31,8%)	88 (22%)	132 (33%)	53 (13,3%)

Based on the results of the study in table 4, it shows that the most frequently answered question is always number 9 "If I get a prescription for antibiotics, I take them after eating" at 58.5%, the most frequently answered question is number 7 "I still take antibiotics according to the doctor even though I feel well" at 23.5%, the most frequently answered question is number 1 "I always use antibiotics when I'm sick" at 60.8% and the most dominant question is never at number 3 "I have used antibiotics on the advice of family or friends without checking with a doctor" at 45.5%.

Based on the results of the Spearman Rank test in table 6, the correlation coefficient value is 0.582 with a significance value of 0.001 ($p < 0.05$). This shows that there is a relationship between the level of DAGUSIBU knowledge and the understanding of antibiotic use in the community of North Denpasar District with a positive or unidirectional relationship. The correlation coefficient value is between 0.41-0.70, meaning that the level of DAGUSIBU

knowledge and the understanding of antibiotic use in the community of North Denpasar District has a fairly strong relationship. Knowledge about DaGuSiBu Medicine is related to the procedures for obtaining, using, storing and disposing of drugs properly and correctly (Cholifatun et al., 2020). This knowledge plays an important role in increasing public understanding of how to obtain and dispose of drugs that are no longer consumed in the right place, so that the quality of life can be improved (Puspasari et al., 2018) and (Dewi et al., 2019). There are limitations to this study, namely that this study only looks at the relationship and does not look at other variables, and this study does not look at other factors that influence DAGUSIBU's knowledge with understanding the use of antibiotics. So it is necessary to conduct further research.

Conclusion

Based on the research that has been conducted regarding Dagusibu's knowledge with the understanding of antibiotic use, it can be concluded as follows:

The description of the number of respondents in the North Denpasar District community who have a high level of DAGUSIBU knowledge is obtained at 59.5% or 238 respondents.

1. The description of the number of respondents in the North Denpasar District community who have a high level of understanding of antibiotic use is obtained at 52.3% or 209 respondents.
2. There is a significant relationship between the level of DAGUSIBU knowledge and the understanding of antibiotic use in the North Denpasar District community with a correlation coefficient value of 0.582, which means that 58.2% of the DAGUSIBU knowledge level influences the understanding of antibiotic use, where this Correlation Coefficient is included in the positive correlation nature with a correlation coefficient value between 0.41-0.70, meaning that the level of DAGUSIBU knowledge and the understanding of antibiotic use in the North Denpasar District community has a fairly strong relationship**.**

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