Socio-demographic and socio-economic relationship to the use of antibiotics without a prescription in diabetes patients

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ABSTRACT: Inappropriate, ineffective and inefficient use of drugs occurs in health care systems throughout the world. Inappropriate use of antibiotics often occurs when people are self - medicating. Diabetes conditions can also reduce endurance so that they often experience infections. The purpose of this study is to determine the factors related to the use of antibiotics without a doctor's prescription in diabetes patients. This research is observational type using the crosssectional study approach. Respondent profiles are used to determine the diversity of respondents based on age, gender, last education, marital status, occupation and income. There was 100 responden that include of this research. There is a significant relationship between age (Sig. 0.02), Last Education (Sig. 0.00), Work (Sig. 0.01), and Income (Sig. 0.01) with the use of antibiotics without recipes. As for the sex (sig. 0.97) and marital status (Sig. 0.53) There is no significant relationship with the use of antibiotics without recipes.

KEYWORDS: Resistance, Antibiotics, Socio-Demographic, Socio-Economics

I. INTRODUCTION

[1]Irrational use of drugs is a major problem worldwide. WHO (World Health Organization) estimates that more than half of drugs worldwide are prescribed, distributed or sold inappropriately, and half of all patients fail to use them. [2]Inappropriate, ineffective and inefficient use of drugs occurs in health care systems throughout the world, especially in developing countries.

In accordance with 2013 National Basic Health Research data, 103,860 or 35.2% of 294,959 households in Indonesia store medicines for self-medication, with the highest proportion in DKI Jakarta (56.4%) and the lowest in East Nusa Tenggara (17.2%). %). There are 3 types of drug preparations stored, of which 35.2% of households stored medicines, the proportion of households which stored hard drugs was 35.7% and antibiotics 27.8%. The existence of hard drugs and antibiotics for self-medication shows irrational use of drugs in society. There are 81.9% of households storing hard drugs and 86.1% of households storing antibiotics obtained without a prescription

[3]Inappropriate and inaccurate use of this hard class of drugs has a fairly high risk for health, according to the origin of the word which means dangerous. If it is used not according to the doctor's indications and diagnosis, it can cause side effects, namely poisoning the body, exacerbating the disease, triggering the emergence of other diseases as a negative effect, causing damage to organs, even death.

[4]There is a relationship between antibiotic resistance and very close antibiotic consumption. [5]Inappropriate use of antibiotics often occurs when people are self -medicating. Swamedication is the use of drugs for self - treatment that is carried out based on the diagnosis of your own symptoms without consulting a doctor, or treatment that is done without using a doctor's prescription.

[6]Diabetes is a metabolic disorder characterized by an increase in blood sugar. Based on International Diabetes Federation (IDF) data in 2021 that diabetes sufferers in the world are estimated to be 537 million (ages 20-79 years). Diabetics are at a great risk of experiencing serious complications both macrovascular and microvascular. The emergence of these complications can worsen the patient's condition and the quality of life of the patient. Diabetes conditions can also reduce endurance so that they often experience infections. The purpose of this study is to determine the factors related to the use of antibiotics without a doctor's prescription in diabetes patients.

II. EXPERIMENTATION

This research is observational type using the crosssectional study approach. The population and sample in this study were diabetes patients who were carrying out routine control. Research inclusion criteria include diabetes patients, patients diagnosed with a minimum of 2 years, routinely using oral antidiabetic and have used antibiotics without recipes for research exclusion criteria, namely patients who have difficulty communicating.

The instrument used in this study was a questionnaire with 10 questions that contain the behavior of the use of antibiotics without recipes. Questionnaire data as a dependent variable. Age, sex, education, and marital status including social demographic independent variables. work and income including socioeconomic variables. All data are analyzed to determine relationships and strength of relationships.

III. RESULT AND DISCUSSIONS

Respondent profiles are used to determine the diversity of respondents based on age, gender, last education, marital status, occupation and income. There was 100 responden that include of this research.

Table 1. Profile of Responden

No	Responden Profile	Frequency	Percentage
1	**Age**		
	20-35 year	26	26%
	35-50 year	56	56%
	>50 year	18	18%
	Total	**100**	**100%**
2	**Gender**		
	Female	21	21%
	Male	79	79%
	Total	**100**	**100%**
3	**Marital status**		
	Merried	88	88%
	Unmerried	12	12%
	Total	**100**	**100%**
4	**Last Education**		
	Low (SD/SMP)	58	58%
	High (SMA/University)	42	42%
	Total	**100**	**100%**
5	**Work**		
	Permanent	4	4%
	Non-permanen job	96	96%
	Total	**100**	**100%**
6	**Income**		
	Rp. 1.000.000-2.500.000	59	59%
	Rp. 2.500.000-4.000.000	33	33%
	Rp. 4.000.000-6.000.000	8	8%
	Total	**100**	**100%**

The questionnaire validity test uses statistical methods with bivariate choleration analysis. The test results show that all items are proven valid in terms of the Pearson Correlate value is greater than the value of R table (> 0.320). The reliability test was carried out statistically using the Cronbach's Alpha test and the value obtained was 0.80> 0.60 which means that the data was reliable with a high reliability category. After the data is collected before further analysis is carried out first a normality and homogeneity test on the data is carried out. In the data normality test the Kolmogorov-Smirnov test was used because data> 50 respondents. The resulting significance value is 0,000 (p <0.05), then the data is not normally distributed.

[7]As shown by Ghasemi and Zahediasl if the subjects collected in a study amounted to hundreds, analysis can ignore the distribution of data, explain further if the number of samples is more> 30-40 the number of sampling distributions will tend to be normal regardless of the data form. Furthermore, the homogeneity test using the Levene Statistic test obtained a significance value of 0.830 (P> 0.05), then the data is stated that the homogeneity requirements.

Based on the results of research on the use of hard drugs without prescription majority of respondents aged 35-50 years with a percentage of 56%, male sex with a percentage of 79%, marital status married with a percentage of 88%, non-permanent jobs (laborers/private employees) with a percentage 96%, and nominal income of Rp. 1,000,000-2,500,000 with a percentage of 59%. As for the level of education, the results of the percentage are almost the same, namely for the low education level (SD/SMP) as much as 58%, and for the higher education level (SMA/Higher Education) as much as 42%. Research Results Behavioral use of antibiotic without prescription categories of good behavior as much as 33%, sufficient behavioral categories as much as 67% and behavioral categories are less than 0%.

Table 2. The behavior of the use of antibiotics without recipes

No	Question	Answer			Total
		Often	**Sometimes**	**Never**	
1	I made antibiotics the first choice of treatment when I was sick	44%	41%	*15%	100%
2	I bought antibiotics with a recipe	*6%	46%	48%	100%
3	I bought antibiotics in an official place	*79%	20%	1%	100%
4	I use antibiotics for family or friends advice without seeing a doctor	34%	58%	*8%	100%
5	I drank antibiotics after eating	*85%	14%	1%	100%
6	If there is more than one type of medicine I will take it simultaneously	3%	44%	*53%	100%
7	When healed I would recommend the drug with other people who have the same symptoms	13%	41%	*46%	100%
8	I find out counter indications (conditions that do not allow a drug used by someone) the antibiotics that I use	*26%	45%	29%	100%
9	I keep antibiotics and will use it again when I get sick	53%	23%	*24%	100%
10	If side effects arise in the use of antibiotics, then I stop using it and consult a doctor or pharmacist	*31%	43%	26%	100%

(*True Answer)

Table 3. The relationship between the respondent's profile to the behavior of the use of antibiotics without a recipe

No	Karakteristik	Kategori		Rerata nilai (SD)	p value	r value
		Cukup (%)	**Baik (%)**			
1	**Gender**					
	Male	53 (53%)	26 (26%)	70,4 (11,2)	0,971	-0,009
	Female	14 (14%)	7 (7%)	70,2 (9,5)		
2.	**Age**					
	20-35 th	12 (12%)	14 (14%)	69,9 (10,3)		
	36-50 th	40 (40%)	16 (16%)	71,6 (10,9)	0,020	0,272
	>50 th	15 (15%)	3 (3%)	69 (7,8)		
3	**Marital status**					
	Merried	60 (60%)	28 (28%)	69,9 (10)	0,524	0,032
	Unmerried	7 (7%)	5 (5%)	70,6 (10,5)		
4	**Last Education**					
	Low (SD/SMP)	49 (49%)	9 (9%)	68 (9,5)	0,000	0,132
	High (SMA/University)	18 (18%)	24 (24%)	71,1 (10,5)		
5	**Work**					
	Permanent	0 (0%)	4 (2%)	74,2 (5)	0,010	0,291
	Non-permanen job	67 (67%)	29 (29%)	70,2 (10,4)		
6	**Income**					
	Rp.1.000.000- 2.500.000	46 (46%)	13 (13%)	71,5 (11,3)		
	Rp.2.500.000- 4.000.000	18 (18%)	15 (15%)	67,8 (9,7)	0,013	0,003
	Rp.4.000.000- 6.000.000	3 (3%)	5 (5%)	71,3 (8,5)		

Based on the results of the analysis of the choleration test using Chi-Square, it is stated that there is a relationship between age and the use of antibiotics without a recipe, seen from the significance value of 0.02 (p <0.05). Increasing a person's age will affect the increase in the level of knowledge but at certain ages the ability of a person to remember and receive new knowledge will be reduced. So that the treatment of treatment carried out will be different. There is no relationship between sex and the use of antibiotics without a recipe, seen from the significance value of 0.97 (P> 0.05). This situation can be said that there is no difference in behavior in terms of differences in the sex of respondents.

There is no relationship between marital status and the use of antibiotics without a recipe, seen from the significance value of 0.52 (P> 0.05). There is a relationship between the last education and the use of antibiotics without a recipe, seen from the significance value of 0.00 (p <0.05). The high level of education will make it easier for a person or the community to obtain and digest information to then make choices in health services and apply healthy living (Shavens, 2007). This is in accordance with the results of Dharmasari's research which states that the level of education affects safe, precise and rational treatment in individuals. The higher the level of education of a person, the more careful the treatment (Dharmasari, 2003).

Based on the results of the analysis of the choleration test using the fisher test, it is stated that there is a relationship between work and the use of antibiotics without a recipe, seen from the significance value of 0.01 (p <0.05). Work will affect the way to find information, if information is more easily obtained, the information obtained is also more and more. [8]This is also in accordance witH others research that work has a significant relationship with the behavior of the use of antibiotics (hard drugs) with the value of P = 0.00

Based on the results of the analysis of the choleration test using Chi-Square, it is stated that there is a relationship between income and the use of hard drugs without a prescription, seen from the significance value of 0.01 (p <0.05). [9]This illustrates the differences in behavior in terms of differences in respondents' income. Income describes economic development within a certain period of time. People with a higher salary will surely pay for medical care and the ability to provide good nutrition. [10]This is also in accordance with other research that income has a significant relationship with the behavior of the use

of antibiotics (hard drugs) with the value of P = 0.00.

IV. CONCLUSION
There is a significant relationship between age (Sig. 0.02), Last Education (Sig. 0.00), Work (Sig. 0.01), and Income (Sig. 0.01) with the use of antibiotics without recipes. As for the sex (sig. 0.97) and marital status (Sig. 0.53) There is no significant relationship with the use of antibiotics without recipes.

SOME OF THE ADVANTAGES FROM THE ABOVE RESULTS
Based on the result we know that there are some factors that can influence the behaviors of using antibiotics without a recipe.

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