

Perceptions, Knowledge, Attitudes of Non-Health Students About Medicines

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ABSTRACT

The lack of knowledge, perceptions and wrong attitudes in society about drugs causes irrational use of drugs. This research aims to assess the perceptions, knowledge and attitudes of non-health students about medicine at the University of Muhammadiyah Magelang. The design of this study used a cross sectional survey with a questionnaire as a research instrument. The sampling technique used is convenience sampling. A total of 107 respondents were used in this study. Perceptions, knowledge and attitudes of non-health students of the Universitas Muhammadiyah Magelang are good. However, the provision of information and education still needs to be done continuously so that non-health students' knowledge of medicine increases.

Keywords: *network perceptions, knowledge, attitudes, non-health students, medicines*

1. INTRODUCTION

The medicine is a chemical compound that is very strong. In addition to great benefits, drugs to wreak havoc. Therefore, the more complete the knowledge about how and how to use it appropriately and safely, then we will reap more benefits [1]. Irrational or non-rational use is the use of medicines in a way that is not compliant with rational use as defined above. Worldwide more than 50% of all medicines are prescribed, dispensed, or sold inappropriately, while 50% of patients fail to take them correctly. Moreover, about one-third of the world's population lacks access to essential medicines [2].

The excessive use of drugs has certainly had a huge negative impact both clinical and economic impacts. The most worrying thing is related to the use of irrational antibiotics which contributes to a very large occurrence of antibiotic resistance [2].

According to research from Eldalo [3], The present study was carried out to provide a baseline data on the attitude, practice and knowledge of Saudi school students toward medicines. The majority (84.5%) of students did not recognize what the term medicines refer to, only 28.8% of participant students defined the pharmacist correctly. These results revealed a lack of basic knowledge of medicines among students. This can influence their future drug use, adherence to medications and even therapy compliance [3]. Poor knowledge can lead to the use of drugs that are commonly used incorrectly which in turn can cause serious effects. In addition, the attitude towards drugs that are formed at a young age can affect the use of drugs in the future. The literature has shown that adolescents get information about drugs from various sources such as: doctors, friend, family members, pharmacist, doctors,

teachers and drug package insertions [4], [5]. This study aims Determining the perceptions, knowledge and attitudes of the non-health students of Universitas Muhammadiyah Magelang about medicine.

2. METHOD

2.1. Research design

This research is an analytic type research with cross sectional approach, because the dependent and independent variables are on the same research subject at the same time. This research is intended to assess the perceptions, knowledge, and thoughts of non-health students of the Universitas Muhammadiyah Magelang for medicine. This research was conducted at the Universitas Muhammadiyah Magelang which was conducted in September 2019.

2.2. Population and Sample

The population used in this study were non-health students of the Universitas Muhammadiyah Magelang, with 107 respondents from various faculties. Inclusion criteria in this study were respondents who were willing to fill out the questionnaire through Google form. The sample used is Random Sampling with the sampling technique is random sampling.

2.3. Questionnaire

The instruments used in this study were questionnaires adopted from Eldalo et al. [3]. The questionnaire consisted of 16 questions which were divided into 3 aspects, namely students' perceptions of the harmful effects of drugs, knowledge of the relationship between drug efficacy and

student attitudes toward health workers. This questionnaire was translated into Indonesian according to the procedure. This questionnaire has been tested for validity and reliability.

2.4. Data analysis

This research was conducted using descriptive analysis. Descriptive method is used to describe the data collected. This data processing uses Microsoft Excel.

3. RESULTS AND DISCUSSION

Table 1 Characteristics of respondents

	Characteristics	N	%
Age	21-22	89	83,2
	23-27	18	16,8
	>27	0	0
Sex	Female	61	57
	Male	46	43
Faculty	Law	24	22,4
	Education	7	6,5
	Islamic Science	19	17,8
	Engineering	29	27,1
	Psychology and Humaniora	17	15,9
Level	Economic and Business	11	10,3
	I	11	10,3
	II	10	9,3
	III	38	35,5
Family background in health science	IV	48	44,9
	Yes	68	63,6
	No	39	36,4

Distribution of respondent characteristics based on the number of respondents obtained as many as 107 respondents including age, sex, level, faculty, and family background who work in the health sector. From the results of the analysis of the data listed in Table 1, the characteristics of respondents were obtained, in general

respondents aged 21-22 years (83.2%) then based on the respondents involved namely female sex (57%). The most respondents are from the Faculty of Engineering with the number (27.1%) and only (63.6%) who have a family background working in the health sector.

Table 2 Overview of respondents' perceptions (harmful effects of medicines)

No	Questions	Correct answer N (%)	Incorret answer N (%)
1	Do you think that medicines may cause harm to humans	54 (50,5)	53 (49,5)
2	Do you know that some medicines may cause allergy?	60 (56,1)	47 (43,9)
3	Do you think that the same medicines can be used in both children & adults?	81 (75,7)	26 (24,3)
4	Do you know that some medicines are not suitable to be used by children?	95 (88,8)	12 (11,2)
5	Do you think that children can use medicines without consultation?	22 (20,6)	85 (79,4)

Data from 107 respondents entered into Table 2 illustrates the respondents' perceptions and it can be concluded that the students of Universitas Muhammadiyah Magelang have understood about the dangers of drugs for students (50.5%), drugs can cause allergies (56.1%), use of the same drugs among children and adults (75.7%), and some drugs are not suitable for children (88.8%). However, on the question of the use of drugs for children without consulting students do not understand the consequences (20.6%).

These results are different in Eldalo [3] that almost 79.6% of students trust their doctors and they use drugs after consulting a doctor, while only 10.9% of them prefer self-managed drugs[3]. Treatment without consulting a drug can endanger health if it is not according to the rules, waste of costs, and time. Adverse reactions such as sensitivity, side effects or drug desistence [6].

Table 3 Overview of respondents' knowledge (the relation between efficacy of medicine and its formulation)

No	Questions	Correct answer N (%)	Incorrect answer N (%)
1	Does the medicine's taste affect its efficacy?	68 (63,6)	39 (36,4)
2	Does the tablet size affect the efficacy?	56 (52,3)	51 (47,7)
3	Does the unit dosage form affect the efficacy?	40 (37,4)	67 (62,6)
4	Does the medicine's color affect its efficacy?	78 (72,9)	29 (27,1)

Based on the results in Table 3, the description of respondents' knowledge about the relationship between drug taste and its efficacy effect (63.6%), the relationship between tablet size and its efficacy effect (52.3%), and the relationship between color and its efficacy effect (72.9%) have answered correctly. However, on the question of the relationship between dose and its efficacy effect (37.4%) the results obtained were unsatisfactory.

The same results were obtained Eldalo et al. stated that wrong knowledge like this might be caused by the respondents' low understanding of drugs. The same thing is also found in adolescents 15-20 years in Saudi Arabia, only 15.4% of respondents who know the correct use of drugs [3].

According to the indicators of therapeutic rationality, which are appropriate medicine, appropriate patient, suitable dosage, suitable time of administration, and the side effects alert [7]. Generally, the administration of drugs is based on average doses, which are expected to have a therapeutic effect with minimal side effects. If the average dose does not cause an effect or cause excessive effects, it will be stopped the drug without the need to consider whether the dose given is in accordance with the needs of patients [8]. If the drug therapy index is large enough, then differences in individual drug levels in a steady state state will not cause problems in determining the dose. If the therapeutic index of a drug is narrow, individualization of the dose becomes important, because even a small dose difference (in mg / kgBW) can cause a significant difference in response [8].

Table 4 Overview of Respondents' Attitudes (healthcare workers and medicines)

No	Questions	Correct answer	Incorrect answer
		N (%)	N (%)
1	If you have new medicine is it important to ask about its efficacy?	105 (98,1)	2 (1,9)
2	If you have new medicine is it important to ask about duration of use?	105 (98,1)	2 (1,9)
3	If you have new medicine is it important to ask when & how to use it?	105 (98,1)	2 (1,9)
4	If you have new medicine is it important to ask about its side effects?	107 (100)	0 (0)
5	Is it important to tell your Dr. about your drug history?	102 (95,3)	5 (4,7)
6	Is it important to tell your Dr. about your allergy to some medicines?	106 (99,1)	1 (0,9)
7	Is it important for pregnant women to consult a physician before taking medicines?	104 (97,2)	3 (2,8)

Based on the results of Table 4 the description of respondents regarding attitudes can be concluded that the students of Universitas Muhammadiyah Magelang have understood about giving questions in advance about the efficacy / effectiveness of drugs (98.1%), duration of time consuming drugs (98.1%), use and how to consume drug (98.1%), side effects of the drug (100%), then tell the history of the disease (95.3%), allergy to the drug (99.1%), and use in pregnant women (97.2%) already answered accordingly.

The same results were obtained Eldalo et al. obtained 656 (64.2%) students have reported the importance of informing doctors or pharmacists about their medical intake history. Thus reporting or consulting a doctor or pharmacist about history is important [3].

Based on the proportion of correct answers in patients, it is known that counselling of drugs given to patients can significantly increase patient knowledge and awareness. Counselling is very important in increasing patient awareness and compliance with treatment. Counselling is an appropriate method in increasing patient knowledge, because counselling is a systematic 2-way communication between patients and pharmacists [9].

Counselling can change patient knowledge and compliance. In this case pharmacists must interact with patients and other health professionals with effective communication to provide understanding or knowledge about drugs and diseases [10].

An increase in knowledge scores after being given counselling shows that counselling is an appropriate method for increasing knowledge, in accordance with the theory which states that to improve one's knowledge can be used by lecturing, reading, and counselling [9].

4. CONCLUSION

Based on this research, it can be concluded that the students of Universitas Muhammadiyah magelang non-faculty of health sciences, most of them are already quite understanding about perceptions, knowledge and attitudes towards medicine, but it is necessary to educate students to know about medicines.

AUTHOR CONTRIBUTIONS

Conceptualization (F.Y); Material research preparation (F.Y, P.P, M.N.A,D.K.D); Methodology (F.Y,P.P); Data collecting (M.N.A,D.K.D); Data analysis and visualization (P.P,M.N.A,D.K.D); Writing—original draft (F.Y, P.P, M.N.A,D.K.D); Presentation (M.N.A).

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