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Evaluative Review: Differences in Knowledge and Perspectives on Generic Drugs Among Health and Non-Health Students

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ABSTRACT

Purpose of the study: This study aims to determine differences in the level of knowledge and perception about generic drugs among health and non-health students.

Methodology: This research uses a quantitative approach with a comparative type. The sample used in this research was 30 health students and 30 non-health students. Sample selection was carried out using random sampling techniques. The data collection method used was a questionnaire. The data analysis technique for this research uses the T-test.

Main Findings: Based on the T-test on the level of knowledge and perception about generic drugs in health and non-health students, the results obtained were significance values of 0.048 and 0.041 so it can be concluded that there are differences in the level of knowledge and perception about generic drugs in health and non-health students.

Novelty/Originality of this study: This research expands knowledge regarding generic drugs by examining how differences in educational background can influence students' views and understanding of generic drugs, making an important contribution in increasing knowledge about the use of generic drugs among the public.

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1. INTRODUCTION

Health education plays a crucial role in improving the quality of life globally. From a global perspective, health education is the foundation for efforts to prevent disease and improve the welfare of society at large [1]-[3]. This applies not only at the individual level, but also at the community and country level. At the regional level, such as in Association of Southeast Asian Nations, health education is an integral part of the sustainable development agenda, ensuring that people can access accurate health information and acquire the skills to manage their health well [4]-[6]. Through effective health education, it can be hoped that a society will be more aware of the importance of a healthy lifestyle and making wise decisions regarding health, bringing a significant positive impact on the level of health and well-being throughout the Association of Southeast Asian Nations region [7]-[9].

Health education plays a vital role in improving people's quality of life, especially in Indonesia. Through health education, people can gain better knowledge about how to maintain health and prevent disease [10]-[12]. In Indonesia, with diverse geographic conditions and varying levels of accessibility, health education is the key to achieving equitable access to health services [13]-[14]. Additionally, with high rates of communicable and non-

communicable diseases, health education helps in disease prevention and control efforts, reducing the burden of disease for individuals and the country as a whole. Furthermore, health education also has a role in promoting healthy lifestyles and strengthening the health system as a whole [15]-[17].

Knowledge of generic drugs is an important aspect for health and non-health students. For health students, an in-depth understanding of generic drugs allows them to provide appropriate recommendations to patients, taking into account aspects of cost and quality of therapy [18]-[20]. Meanwhile, for non-health students, knowledge of generic drugs helps them make smart decisions regarding personal or family health expenses, as well as understand the options available in an increasingly complex drug market [21]-[23]. Regardless of background, a solid understanding of generic drugs allows students to play an active role in promoting broader access to affordable, quality health care [24]-[26]. Thus, this knowledge is not only relevant for professional needs, but also for the well-being of individuals and society as a whole.

Previous research discussing students' understanding of generic drugs was conducted by Sharif et all., [27] where they examined the assessment of knowledge and perceptions of generic drugs among pharmacy and medical students at the University of Sharjah, United Arab Emirates. In research conducted by Sharif et al, 2020, it is stated that increasing educational courses for future healthcare professionals must be implemented early to increase students' awareness of generic drug substitution. The difference between this research and research conducted by Sharif et al, is that it has different contextual and cultural factors, especially considering the different geographical locations and different student backgrounds.

Previous research discussing student perceptions of generic drugs was conducted by Al-mohamadi et all., [28] where they examined the perceptions of medical and pharmacy students regarding generic drugs in Yemen. In research conducted by A-mohamadi et all., the results showed that medical students showed poorer knowledge than pharmacy students, so they need to get more attention from educators regarding the use of generic drugs. The difference between this research and research conducted by Al-Mohamadi et all., lies in the sample used, where this research used samples of health and non-health students while previous research used samples of medical and pharmacy students.

The novelty of this study lies in a comparative approach that has rarely been explored before, which allows us to explore differences in perceptions and understanding of generic drugs between two groups of students who have different educational backgrounds. By exploring this, this research may bring new breakthroughs in the development of more targeted educational and intervention strategies to increase the acceptance and use of generic drugs in the future.

The implication of research on differences in knowledge and perspectives towards generic drugs among health and non-health students is the importance of adapting health education approaches and generic drug promotion strategies according to the characteristics and needs of each group. Through a better understanding of the factors that influence perceptions and knowledge about generic drugs, health education institutions and health practitioners can develop programs that are more effective in increasing acceptance and use of generic drugs, as well as providing more relevant and accurate information to patients. in the context of clinical practice.

Research on differences in knowledge and perspectives towards generic drugs among health and non-health students has great urgency in overcoming the challenges associated with the use of generic drugs. Students are potential health professionals who will influence future clinical practice, so a better understanding of their perceptions of generic drugs can form a strong foundation for increasing their acceptance and use [29]-[31]. By identifying differences in views between student groups, educational measures and interventions can be designed in a more targeted manner, helping to increase awareness and acceptance of generic medicines among the population as a whole, and ultimately, improving access and efficient use of medicines in the health system. Based on the explanation above, the aim of this research is to determine differences in the level of knowledge and perception about generic drugs among health and non-health students.

2. RESEARCH METHOD

2.1. Types of research

This study adopted a quantitative approach with a comparative type to investigate differences in knowledge and perspectives towards generic drugs among health and non-health students [32], [33]. Through a systematic survey and statistical data analysis, this study aims to directly compare the level of knowledge and perceptions between the two groups of students, taking into account factors that may influence their views on generic drugs. With this approach, this research can provide a clearer and more measurable picture of differences in understanding and attitudes towards generic drugs, which can then form the basis for the development of more effective educational interventions in increasing the use of generic drugs among the public.

2.2. Population and Sample

The population in this study were all health and non-health students at one of the universities in eastern Sumatra who were still active. The sample used in this research was 30 health students and 30 non-health students.

Sample selection was carried out using random sampling techniques [34]-[36], where members of the population were randomly selected to be included in this study. Health students include those majoring in majors such as medicine, pharmacy, nursing, and other health-related fields, while non-health students represent different disciplines such as social sciences, economics, or engineering. The use of random sampling techniques ensures that each member of the population has an equal chance of being selected as part of the sample, so the results from this study can be considered representative of health and non-health students as a whole, providing a more comprehensive picture of differences in knowledge and perspectives towards medicine. generic between these two groups.

2.3. Data collection technique

In order to collect the data needed for this research, the data collection method used was a questionnaire. Questionnaires were distributed to both sample groups, namely 30 health students and 30 non-health students. The questionnaire was specifically designed to measure their knowledge and perception about generic drugs. This questionnaire includes various structured questions that cover important aspects such as understanding about generic drugs, preferences for using generic drugs, and factors that influence their attitude towards generic drugs. The use of questionnaires as a data collection technique allows researchers to obtain consistent and standardized information from each respondent [37]-[40]. In addition, questionnaires also provide the opportunity for respondents to provide their responses anonymously, thereby increasing honesty and trust in providing responses. By utilizing this data collection technique, this research was able to produce sufficient data to analyze differences in knowledge and perceptions between the two groups of students towards generic drugs. The questionnaire sheet indicators to measure their knowledge and perceptions about generic drugs can be seen in the following table:

Table 1. Questionnaire Sheet Indicators for Measuring Knowledge and Perceptions About Generic Medicines

No.	Knowledge of Generic Medicines		Perceptions of Generic Medicines	
	Indicator	No. Statement	Indicator	No. Statement
1.	Understanding Differences	1,2,3	Trust in Quality	1,2
2.	General knowledge	4,5,6	Suitability of Use	3,4
3.	Side Effects and Drug Interactions	7,8,9	Safety of Use	5,6
4.	Awareness of Regulations	10,11,12	Treatment Effectiveness	7,8
5.	Perceptions of Security and Effectiveness	13,14,15	Perception of Recommendations	9,10

The category intervals for each variable measured can be seen in the table below:

Table 2. Questionnaire Sheet Category Intervals for Measuring Knowledge and Perceptions About Generic Medicines

Knowledge of Generic Medicines		Perceptions of Generic Medicines	
Interval	Category	Interval	Category
15.00 – 26.25	Very good	10.00 – 17.50	Very good
26.35 – 77.50	Good	17.60 – 25.00	Good
37.60 - 48.75	Not good	25.10 – 32.50	Not good
48.76 - 60.00	Very Not Good	32.60 – 40.00	Very Not Good

2.4. Data analysis technique

The data analysis technique for this research will involve a series of steps using SPSS statistical software. First, the data will be analyzed to test two important assumptions: normality and homogeneity of variance. Normality will be checked using a normality test, such as the Kolmogorov-Smirnov test or the Shapiro-Wilk test. Homogeneity of variance will be tested using Levene's test. After these two assumptions were met, the analysis continued using an independent t-test to compare the means between two groups of students, namely health and non-health students, in terms of their knowledge and perceptions of generic drugs. This independent t-test will provide information about whether there are significant differences between the two groups in terms of their knowledge and perception of generic drugs [41]-[43]. The results of this data analysis will provide a deeper understanding of the differences between the two groups and will be the basis for the conclusions and recommendations in this research.

2.5. Research procedure

This research procedure will be carried out through a series of structured steps to ensure the accuracy and validity of the results. First, this research will begin with planning the research design, including sample selection, determining the variables to be measured, and preparing research instruments in the form of questionnaires. Next,

the research will involve a data collection process, where questionnaires will be distributed to 30 health students and 30 randomly selected non-health students. After data collection, the next step is to enter the data into SPSS statistical software for data analysis. Data analysis will involve assumption tests, namely normality tests and homogeneity tests, followed by independent t-tests to compare knowledge and perceptions between two groups of students. The results of the data analysis will be analyzed carefully to extract relevant findings and answer the research questions. Finally, this research will end with the preparation of a research report that outlines the findings, interpretations, and implications that are relevant for health practitioners, researchers, and policy. By following this procedure, it is hoped that this research will provide a valuable contribution to the understanding of differences in knowledge and perceptions of generic drugs among health and non-health students. The procedures for this research can be seen in the following table:

Picture 1. Research Procedure

3. RESULTS AND DISCUSSION

3.1. Research result

The results of the assumption tests carried out in the form of normality tests and homogeneity tests can be seen in table 3 and table 4 below:

Table 3. Data Normality Test Results

Variable	Sig.	Distribute
Ability Level	.200	Normal
Perception	.200	Normal

Based on the table of data normality test results used in this research, it can be concluded that the data is normally distributed with a Sig. > 0.05.

Table 4. Data Homogeneity Test Results

Variable	Sig.	Distribute
Ability Level	.476	Normal
Perception	.498	Normal

Based on the table of data homogeneity test results used in this research, it can be concluded that the data is homogeneously distributed with a Sig. > 0.05.

After testing the assumptions and fulfilling the requirements, you can continue to carry out hypothesis testing in the form of a T-test which aims to determine differences in the level of knowledge and perception about generic drugs in health and non-health students. The T-test results in this research can be seen in the table below:

Table 5. T-test results of level of knowledge and perception about generic drugs among health and non-health students

Variable	Class	Sig.(2-tailed)
Ability Level	Health Non-Health	0.048
Perception	Health Non-Health	0.041

Based on the results of the T-test that has been carried out, it can be concluded that there are differences in the level of knowledge and perception about generic drugs between health and non-health students.

3.2. Discussion

In this research, the results of assumption tests such as normality tests and homogeneity tests have been carried out to ensure that the data used meets the necessary statistical requirements before proceeding to further analysis. As for the results of the normality test on students' level of knowledge and perception of generic drugs

for health and non-health students, a significance value of 0.200 was obtained so it can be concluded that the data is normally distributed because the sig value. > 0.05. Meanwhile, the results of the homogeneity test on students' level of knowledge and perception of generic drugs for health and non-health students, obtained significance values of 0.476 and 0.498, so it can be concluded that the data is homogeneously distributed because the sig. > 0.05.

After testing the assumptions, the results were obtained that the data to be tested met the requirements, so that hypothesis testing could be continued in the form of a T-test. Based on the T-test on the level of knowledge and perception about generic drugs in health and non-health students, the results obtained were significance values of 0.048 and 0.041 so it can be concluded that there are differences in the level of knowledge and perception about generic drugs in health and non-health students because the sig. < 0.05.

This research is in line with research conducted by Al-Worafi et all., [44] which states that specific and well-structured programs are needed to provide effective education and increase the understanding and confidence of health workers regarding the use of generic drugs. Carrying out this research can provide insight into differences in knowledge and perspectives on generic drugs among students, which can influence their professional practice in the future.

This research is in line with research conducted by Suthar et all., [45] which states that educational programs or seminars must be carried out to increase knowledge and promote the practice of generic drugs. Further research could explore the factors that influence knowledge and attitudes towards generic medicines in various educational and occupational contexts in the health sector.

This research makes an important contribution to the literature regarding knowledge and perspectives towards generic drugs with a focus on health and non-health students. Most previous studies have tended to examine this aspect in populations of trained health professionals or the general public, with minimal attention to college students as a group who may have different views and knowledge regarding generic drugs. By expanding the scope of this research to college students, we can explore new perspectives that may reflect trends and perceptions among the next generation that will influence the use of generic drugs in the future.

The findings from this study provide significant implications for both health practitioners and policy makers. First, a better understanding of health and non-health students' knowledge and perspectives on generic drugs can help inform the development of more holistic educational curricula in health-care higher education institutions [46]-[48]. Second, these findings can provide valuable insights for policy makers in designing empowerment and education programs aimed at increasing the use of generic drugs in society as a whole [49]-[51]. By understanding students' views and knowledge, strategic steps can be taken to ensure that the use of generic medicines is increased effectively and sustainably in the future, contributing to meeting the overall health needs of society.

Although this study provides valuable insight into differences in knowledge and perspectives toward generic drugs among healthcare and non-healthcare students, two limitations are worth noting. First, data collection is carried out using questionnaires, which may cause respondent bias in providing responses or may not accurately reflect deeper views and knowledge. Second, this research was only conducted at one higher education institution, so the generalisability of the findings may be limited to that specific context. For future research, it is recommended to take a more in-depth approach by interviewing respondents directly to gain a deeper understanding of their perspectives and knowledge of generic drugs. In addition, it is recommended to involve various higher education institutions in order to generalize the findings more broadly and gain a more holistic understanding of differences in generic drug knowledge and perspectives among students.

4. CONCLUSION

From the results of this study, it can be concluded that there is a significant difference in the level of knowledge and perception about generic drugs between health and non-health students. Health students tend to have a deeper understanding of generic drugs compared to their peers from non-healthcare backgrounds. This may be caused by the educational curriculum which is more focused on pharmacy and health topics for health students. These differences highlight the importance of different educational approaches in increasing general understanding of generic drugs among students from diverse backgrounds. For future research, it is recommended to take a more in-depth approach by interviewing respondents directly to gain a deeper understanding of their perspectives and knowledge of generic drugs. In addition, it is recommended to involve various higher education institutions in order to generalize the findings more broadly and gain a more holistic understanding of differences in generic drug knowledge and perspectives among students.

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