Knowledge Level of DAGUSIBU in Pharmacy Department Students at Health Polytechnic of Tanjung Karang

Profil Pengetahuan tentang DAGUSIBU Obat pada Mahasiswa di Jurusan Farmasi Poltekkes Kemenkes Tanjung Karang

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<th>ARTICLE INFO</th>
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<td>Article history</td>
<td>There are many health problems due to lack of knowledge and understanding of how to use, store and dispose of drugs. The Indonesian Pharmacist Association (IAI) to design a program called DAGUSIBU (Get-Use-Save-Dispose). Information about DAGUSIBU is important to avoid giving wrong information from occupational pharmacy to patients. This study aims to determine Knowledge Level Profile of DAGUSIBU in Pharmacy Department Students in Health Polytechnic of Tanjung Karang 2022. This research was observational research design with a cross-sectional approach which was carried out from October to November 2022 involving 226 pharmacy students class of 2020 to 2022 in Health Polytechnic of Tanjung Karang. Data obtained by using an online questionnaire that had been tested for validity and reliability. In the aspect of getting medicine, the knowledge level pharmacy students 15.5% good, 38.9% sufficient, and 45.4% lacking. In the aspect of drug use, having a greater knowledge level of 11.1% is good; 44.7% sufficient; and 44.2% less. In the aspect of saving medicine, having a knowledge level of 9.3% is good; 40.3% sufficient; and 34.0% less. Bivariate analysis using ANOVA to find out differences of knowledge level among classes. The results of the ANOVA test showed a p-value of 0.112 so that it can be concluded that there is no significant difference in the level of DAGUSIBU knowledge between batches in Pharmacy students at Health Polytechnic of Tanjung Karang in 2022.</td>
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| Keywords: | DAGUSIBU; Knowledge; Medicine; Pharmacy. |

Kata kunci: DAGUSIBU; Pengetahuan; Obat; Farmasi.

Masih banyak permasalahan kesehatan akibat kurangnya pengetahuan dan pemahaman mengenai cara penggunaan, penyimpanan dan pembuangan obat. Ikatan Apoteker Indonesia (IAI) merancang suatu program yang disebut DAGUSIBU (Dapatkan-Gunakan-Simpan-Buang). Informasi mengenai DAGUSIBU penting untuk menghindari kesalahan pemberian informasi dari tenaga teknis kefarmasian (TTK) ke pasien. Tujuan penelitian untuk mengetahui profil pengetahuan mahasiswa jurusan Farmasi Politekkes Kemenkes/Tanjung Karang mengenai DAGUSIBU. Metode penelitian ini menggunakan desain penelitian observasional dengan pendekatan bersifat cross sectional yang dilaksanakan dari bulan Oktober hingga November 2022 dengan melibatkan 226 responden dari jurusan Farmasi Politekkes Kemenkes Tanjung Karang. Pengumpulan data dilakukan dengan kuesioner online dalam bentuk google form yang telah di uji validitas dan reliabilitasnya. Pada aspek mendapatkan obat, tingkat pengetahuan mahasiswa Farmasi Politekkes Kemenkes Tanjung Karang angkatan 2020-2022 sebesar 15.5% baik, 38.9% cukup, dan 45.4% kurang. Pada aspek gunakan obat, memiliki tingkat pengetahuan sebesar 11.1% baik; 44.7% cukup; dan 44.2% kurang. Pada aspek simpan obat, memiliki tingkat pengetahuan sebesar 9.3% baik; 40.3% cukup; dan 34.0% kurang. Analisa data lanjutan menggunakan uji ANOVA untuk mengetahui ada tidaknya perbedaan pengetahuan antar tingkat mahasiswa di program studi Farmasi Politekkes Kemenkes Tanjung Karang. Hasil uji ANOVA menunjukkan nilai p 0.112 sehingga dapat ditarik kesimpulan bahwa tidak ada perbedaan tingkat pengetahuan DAGUSIBU yang bermakna antar angkatan pada mahasiswa jurusan Farmasi Politekkes Kemenkes Tanjung Karang tahun 2022.

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INTRODUCTION

Drugs and pharmaceutical products have become an essential part of life. Many problems related to drugs in the community, both drugs obtained from a doctor's prescription and those obtained on the initiative of self-medication. The use of over-the-counter drugs without adequate knowledge and information can cause problems such as overdoses, inappropriate drug use times, drug interactions/drug abuse, and can increase the incidence of antimicrobial resistance (Purwidyani et al., 2019). Drug-related problems occur due to the lack of understanding and awareness of drug use, while information through vigorous promotions or advertisements about drugs varies widely which has an impact on patient behavior to tend to use drugs independently (Puspasari et al., 2018).

DAGUSIBU (Get, Use, Save and Dispose) is a program to increase public awareness regarding procedures for using and managing drugs properly and correctly through information on how to obtain, use, store, and dispose of drugs properly (PP IAI, 2014). This program is important because it can increase awareness of how to get, use, save, and dispose drugs so that people's quality of life will also increase (Dewi et al., 2019).

A comparative study at Ahmad Dahlan University in Yogyakarta showed that students majoring in health had a higher level of knowledge about DAGUSIBU than non-medical students. This level of knowledge differs statistically significantly as shown by p-value of 0.004 (Ilahmudah, 2019). Another observational study on Pharmacy students at University of Mataram showed that in the aspect of getting medicine 20% of students had good knowledge, 40% is sufficient, and 40% less. In the aspect of using drugs students have a good knowledge level of 42.8%; 14.3% is sufficient; and 42.8% less. In the aspect of storing drugs, the level of knowledge was only in the sufficient and less categories, namely 37.5% and 62.5%. In the aspect of disposing of drugs, the level of student knowledge is evenly distributed in each category of 33.3% (Sariasih et al., 2021).

Previous study at University of Mataram showed that the majority of pharmacy students knowledge level about DAGUSIBU is not entirely good. It can trigger drug-related problems leading to suboptimal therapy. The proper way of storing drugs greatly affects the stability of the drug. The medicine is stored so that it is protected from the effects of humidity, temperature, and light or sunlight (Lutfiyati et al., 2017). This program is important for pharmacy students relates to their role as healthcare professional who will provide education regarding drug use and storage (Ihsan et al., 2018). The aims of this study is to describe profile of level knowledge of DAGUSIBU in pharmacy students at Health Polytechnic of Tanjung Karang. This study is important due to their role as drug information provider in the future.

METHOD

This study harnessed the observational research design with a cross-sectional approach. This study was conducted at Pharmacy Department, Health Polytechnic of Tanjung Karang from October to November 2022 with a sample size of 226 pharmacy student class of 2020 to 2022. This study has been declared to be ethically appropriate with ethical approval number is No.293/KEPK-TJK/X/2022. Inclusion criteria in this study are:

1. respondent are registered students of Pharmacy Department in Health Polytechnic of Tanjung Karang;
2. aged 18-23 years;
3. willing to become respondents.

The exclusion criteria for this study is that respondents did not complete the questionnaire.

Data obtained by questionnaires that have been tested for validity and reliability. The questionnaire was made in the form of a share link google form. The validity test was conducted on 30 respondents. Valid questionnaire if $R_{\text{count}}$ value is greater than the $R_{\text{table}}$ value. Reliability questionnaire showed by Cronbach's Alpha value is higher than 0.6 (Sujarwedi, 2014). According to Notoatmodjo (2014) level of knowledge categorized as good (if the answers are 76-100% correct), sufficient (if the answers are 56-75%), and less (if the answers are <56%). The ANOVA test was conducted to determine whether there were differences in the level of DAGUSIBU knowledge level between class of 2020, 2021 and 2022.

RESULT

Study was conducted on 226 Pharmacy Department students Health Polytechnic of Tanjung Karang. Demographic data of respondents obtained included age, sex and class.
In this study valid questionnaire divided into 4 aspects, such as how to get the drug, how to use the drug, how to store the drug, and how to dispose the drug. Knowledge level of respondents based on these 4 aspects can be seen in Table 2.

Table 2. Knowledge Level Based on Get, Use, Store, and Dispose of Medicines Aspects

<table>
<thead>
<tr>
<th>Domain</th>
<th>Knowledge Level (%)</th>
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<tbody>
<tr>
<td></td>
<td>Good</td>
<td>Sufficient</td>
</tr>
<tr>
<td>Get</td>
<td>15.5</td>
<td>38.9</td>
</tr>
<tr>
<td>Use</td>
<td>11.1</td>
<td>44.7</td>
</tr>
<tr>
<td>Save</td>
<td>9.3</td>
<td>20.8</td>
</tr>
<tr>
<td>Dispose</td>
<td>25.7</td>
<td>40.3</td>
</tr>
</tbody>
</table>

Knowledge level of DAGUSIBU based on class can be seen in Table 3. Study shows that in class 2020 as many as 22.4% of students have a good level of knowledge, 69.3% have an sufficient level of knowledge and the rest have a low level of knowledge about DAGUSIBU. The highest percentage for students who have a good level of knowledge is owned by class of 2020.

Table 3. Knowledge Level Based on Class

<table>
<thead>
<tr>
<th>Class</th>
<th>Knowledge Level (%)</th>
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<tr>
<td></td>
<td>Good</td>
<td>Sufficient</td>
</tr>
<tr>
<td>2020</td>
<td>22.4</td>
<td>69.3</td>
</tr>
<tr>
<td>2021</td>
<td>17.5</td>
<td>70.9</td>
</tr>
<tr>
<td>2022</td>
<td>20.9</td>
<td>67.0</td>
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ANOVA test was conducted to find out the differences knowledge level of DAGUSIBU Medicine between students in the class of 2020, 2021 and 2022.

Table 4. Comparison Knowledge Level of DAGUSIBU Based on Class

<table>
<thead>
<tr>
<th>Class</th>
<th>Mean</th>
<th>p-value</th>
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</thead>
<tbody>
<tr>
<td>I</td>
<td>70.10</td>
<td>(±1.932)</td>
</tr>
<tr>
<td>II</td>
<td>67.80</td>
<td>(±2.004)</td>
</tr>
<tr>
<td>III</td>
<td>71.35</td>
<td>(±2.177)</td>
</tr>
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</table>

The results of this test yielded a p-value of 0.112 so that it can be concluded that there is no statistical difference in the level of knowledge about DAGUSIBU Medicine between students in class 2020, 2021 and 2022.

DISCUSSION

Based on table 1, the number of male respondents was 27 students (11.9%) and female students were 199 students (88.1%). This is similar to study conducted by (Najah, 2016) at Gadjah Mada University and Sanata Dharma University which stated that from year to year the number of women increasingly dominates the total number of pharmacy students. There are several factors that can influence this phenomenon:

1. Lectures and employment in pharmacy major requires high precision in the process. There is a stereotype that connects a high level of accuracy with the female gender.

2. Biological factors, such as differences in types of hormones that are dominant in women and men. Women are dominated by estrogen and progesterone which have an impact on feminism and accuracy while men are dominated by the testosterone which shows masculinity.

A study conducted by Kurniasari (2015) showed that masculine-related jobs were perceived as more appropriate for the male gender. Meanwhile, work related to feminism is perceived as more suitable for women. Respondents in this study ranged from 17 to 21 years old with the highest age being 19 years and the lowest being 21 years. Knowledge level of respondents based on these 4 aspects can be seen in Table 2. Based on interviews, there are several reasons why students from class of 2020, 2021 and 2022 giving wrong answers. For example, they assume that drug store has the legality to sell Cetirizine. Others admitted that they had a wrong perception and thought that the cetirizine in question was chlorpheniramine maleate.

In aspect of how to use the drug, the results of the majority of the respondents answers were in the sufficient category (44.7%), although only slightly different from the answers that were in the less category (44.2%). In question number 9 regarding how to use suppositories, only 44.2% of students answered correctly. Many students can not differs between suppositories and ovels so they choose the wrong answer. Majority class of 2020 dan 2021 choose the wrong answer about how to use cream. They thought that the thicker...
the cream is applied, the more optimal the effect will be, even though the correct way to use the cream is to spread it thinly evenly (Savira, 2020).

Nearly 70% of students majoring in Pharmacy Department at Health Polytechnic of Tanjung Karang have a sufficient level of knowledge on the aspect of storing medicines. In question number 15 as many as 74.3% of students answered the questions in the questionnaire incorrectly. The results of the interviews indicated that they did not know the best storage temperature for eye ointment, therefore they felt that 8-15°C was the ideal storage temperature for sterile eye ointment (Ratnasari et al., 2019). Several students from class of 2022 also said that in their daily lives, their mothers always kept eye ointment in the refrigerator so they thought what their mothers did was the right answer to that question. Study shows there were 9.3% of the respondents who still had good level of knowledge on the aspect of drug storage. Previous research conducted by Sariasih et al. (2021) on pharmacy students at the University of Mataram showed that there were no students who had a good level of knowledge in aspects of drug storage. The reasons obtained by the researchers were the lack of information regarding drug storage when buying drugs at the pharmacy, students did not know about the temperature of drug storage, and the lack of accuracy in choosing answers in the questionnaire (Al Azmi et al., 2017).

In the aspect of how to dispose of drugs, 40.3% of respondents had sufficient knowledge and 25.7% had good knowledge. This is the highest compared to other aspects. There were still many respondents who were wrong (72.6%) in question number 20. They revealed that their mistake in answering was because students thought that eye drops preparations could be used continuously for up to 3 months from the time drug was opened. There are also those who argue that as long as it is stored in the refrigerator, eye drops can be used for 90 days after the seal is opened. As many as 65% of respondents answered statement number 19 correctly. In previous studies, many respondents were fooled by this type of question. Its because they think that separating topical preparations from the tube can pollute the environment even though this is the goal so that the contents of the tube have no potential for misuse (Al Azmi et al., 2017).

Knowledge level based on class are performed in Table 3. The research data shows that in class 2020 as many as 22.4% of students have a good level of knowledge, 69.3% have an sufficient level of knowledge and the rest have a low level of knowledge about DAGUSIBU. The class of 2020 has the highest percentage of students who have good knowledge. This is reasonable because class of 2020 got self-medication subject and DAGUSIBU is one of its part. However, a different phenomenon occurred in class of 2022 and 2021. Data shows that in class 2021 as many as 17.5% of students have a good level of knowledge, 70.9% have an adequate level of knowledge and the rest have a low level of knowledge about DAGUSIBU. Percentage of students with good knowledge level of DAGUSIBU in class of 2021 is lower when compared to students of class of 2022. Previous studies have shown that knowledge level not always in line with class level in Pharmacy Major (Sariasih et al., 2021). These two batches have not received self-medication subject yet, but there are many factors that cause the percentage of class of 2022 to be higher than class of 2021, including factors of student accuracy and activeness in the process of teaching and learning in lectures. Class of 2022 students have already received pharmaceuticals courses so there is an opportunity for those who study harder and have a stronger memory to have much better knowledge than the class of 2021.

We carried out further data analysis to find out whether there were differences in the level of knowledge about DAGUSIBU between students in class of 2020, 2021 and 2022 using ANOVA test. The result is p value of 0.112 so that it can be concluded that there is no statistical difference in the knowledge level of DAGUSIBU between class of 2020, 2021 and 2022.

CONCLUSIONS

From the results, it can be concluded that the knowledge level of pharmacy department students varies in 4 aspects, getting, using, storing and disposing of drug. Students of Health Polytechnic of Tanjung Karang of 2022-2020 has varying levels of knowledge in the aspects of obtaining, using, storing and disposing of drugs. There is no statistical difference in the level of knowledge about DAGUSIBU Medicine between students in class of 2020, 2021 and 2022.
REFERENCES


