

OVERVIEW OF THE LEVEL OF KNOWLEDGE OF DRUG DAGUSIBU IN BAUBAU POLYTECHNIC PHARMACY STUDENTS IN 2025

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A B S T R A C T

DAGUSIBU (Get, Use, Save and Dispose of) is a program initiated to increase public awareness about the proper and responsible use of drugs through this program, the public is expected to gain a correct understanding of how to obtain, use, store and dispose of obst in order to avoid mistreatment and adverse impacts. This study aims to find out the overview of the level of knowledge of pharmacy students regarding the concept of DAGUSIBU drugs as an important provision in their role as prospective health workers. The research design used is *Cross-sectional*, which is a method that emphasizes the measurement of variables at a certain time. Data was obtained through primary sources by distributing questionnaires to respondents and documenting the process of filling out questionnaires for students of the 2022-2024 batch. The sampling technique was carried out using *the total sampling* method so that the entire population became the research respondents. The results of this study show that student knowledge related to DAGUSIBU as a whole is in the Sufficient category with a percentage of 67%. If you look at each aspect, knowledge in the Get and Use aspects is 68% each, the Save aspect is 69% while the Discard aspect gets the lowest score of 57%. In general, the level of knowledge of Baubau Polytechnic Pharmacy students about DAGUSIBU Drugs is still in the Sufficient category. This emphasizes the need to increase education and understanding so that students as prospective health workers are able to provide correct information to the community.

INTRODUCTION

Drug abuse is still a public health problem because it can cause poisoning, overdose and even death (Oktaviani et al. 2021). Although the government has regulated pharmaceutical service facilities through official regulations, the reality is that there are still people who get medicines from improper sources, such as other people, health workers and traditional medicine sellers (M. Rifqi Efendi et al. 2021). In addition, the use of over-the-counter drugs without a prescription is also often misused, so it risks causing overdose and adverse side effects (Khuluq and Handayani 2018). Another problem that is often overlooked is the storage of drugs, because improper storage can change the properties and stability of drugs (Aswad *et al.* 2019). Not only that, improper disposal of drugs also contributes to environmental pollution that is harmful to the ecosystem (Nuryeti and Ilyas 2018). Therefore, the role of pharmaceutical personnel is needed in providing education related to the use and management of effective drugs through the DAGUSIBU program (Andriana and Putri 2020).

The level of knowledge is one of the important factors that determine the success of a health program. Good knowledge will affect a person's attitude and behavior in receiving and applying the health information provided (Happy 2023). Explained that the level of public knowledge about vaccination plays a big role in the success of health programs, because low knowledge is often an obstacle to the acceptance of health interventions. This is in line with research (Syafriah 2024) which found that the knowledge of self-medicine in the community greatly determines the accuracy of the use of drugs in overcoming diseases, so that a good understanding can prevent errors and the risk of side effects. These findings show that the knowledge aspect has a crucial role, including in efforts to rationalize the use of drugs through the DAGUSIBU program.

DAGUSIBU is a guideline for rationalizing the use of drugs that includes obtaining drugs only through official health facilities (Zulbayu *et al.* 2021). Use according to the dose, rules of use, and obligation to consume antibiotics (Permenkes 2020), (BPOM 2025). Storing safely as an effort to

maintain the quality of therapy according to drug indications (Pratiwi and Rezkiani 2018). As well as disposing of drugs correctly to prevent environmental pollution and potential abuse (2020 Permenkes 2020).

Based on previous research conducted by (Intan Ningtyas Sariasih 2021) entitled "The Level of Knowledge of DAGUSIBU Drugs in Pharmacy Students of the Faculty of Medicine, University of Mataram in 2020". It shows that the knowledge of pharmacy students of the University of Mataram class of 2017-2020 varies in 4 aspects, namely the aspect of getting in the sufficient category, using it in the good category, saving it in the low category and discarding it is in the sufficient category. Similar research was conducted by (Rumi, Parumpu, and Wulandari 2022) regarding the level of knowledge of health students at Tadulako University of Central Sulawesi also shows that students have a good knowledge of DAGUSIBU.

Although various studies have examined people's knowledge and behavior regarding drug use, there is a disconnect between knowledge and real practice in everyday life. Study (Alfian et al. 2021) The study found that most Indonesian households still throw unused medicines in public bins or give them to others, even though they are aware of the potential adverse effects on health and the environment.

METHOD

Types of tian Analyzers

This study is included in an observational study with a cross-sectional design. This design can be used to measure variables at the same time by utilizing primary data obtained through the distribution of questionnaires to respondents. In addition, documentation was also carried out on the subjects who filled out the questionnaire.

Research Time

This research started from May to June 2025.

Research Place

This research was conducted at Baubau Polytechnic.

Population

The population in this study is 267 students of Pharmacy at Baubau Polytechnic Class of 2022, 2023, 2024 who meet the inclusion and exclusion criteria.

Sample

Sampling in this study used a total sampling technique, namely the entire population that met the inclusion criteria was used as respondents. However, at the time of data collection, not the entire population could be reached because there were some students who were not on campus when the questionnaire was distributed. Therefore, only 244 successfully filled out the questionnaire and data from the respondents were analyzed in this study.

Although not all populations responded, the study was still categorized using total sampling with limited (*non-responding*) end-respondents.

Research Instruments

The instrument used in this study was in the form of a questionnaire

Data Collection Techniques

Data collection was carried out by utilizing primary data, namely through the distribution of questionnaires to respondents who were research samples

Data Analysis Techniques

The collected data is then analyzed using *the help of Microsoft Excel software*. This research questionnaire consisted of 23 questions arranged in the form of "Yes" and "No" answer choices. Respondents who answered yes to the question were given a score of 1, while the wrong answer was given a score of 0. Furthermore, the result of the score is calculated to obtain the percentage of correct answers.

Knowledge level data will be scored on each question and the overall total, namely:

1. Knowledge level Good if answering 76-100% correctly
2. Knowledge level Sufficient if answering 56-75% correctly
3. Less level of knowledge if the answer is <56 of the total answer to the question

$$\text{Percentage score (p)} = \frac{\text{Average number (x)}}{\text{ideal skor (n)}} \times 100\%$$

RESULTS & DISCUSSION

RESULT

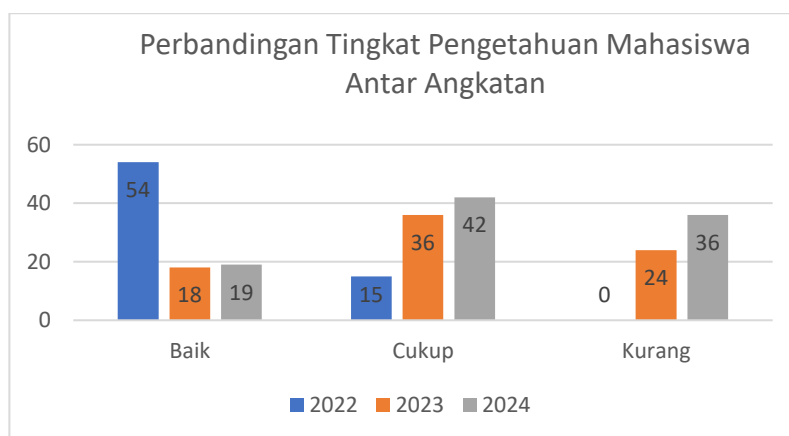
Table 1 Characteristics of Respondents

Gender	Sum	Percentage
Man	13	5%
Woman	231	95%
Force		
2022	69	28%
2023	78	32%
2024	97	40%
Total	244	100%

(Source: Primary Data, 2025)

Based on **Table 1**, it can be seen that out of a total of 244 respondents, the majority were women, namely 231 people (95%), while men only numbered 13 people (5%). When viewed from the batch, the most respondents came from the class of 2024, namely 97 people (40%), followed by the class of 2023 as many as 78 people (32%) and the class of 2022 as many as 69 people (28%).

Figure 1 Comparison Chart of Student Knowledge Level by Overall Batch of 2022, 2023 and 2024



(Source: Primary Data, 2025)

The results of the data analysis show a comparison of the knowledge level categories of students of the 2022, 2023 and 2024 batches. The class of 2022 is dominated by the "Good" category as many as 54 Respondents, while the classes of 2023 and 2024 tend to be more in the "Sufficient" and "Less" categories, it can be seen that the class of 2024 has the largest number in the "Less" category, which is as many as 36 Respondents, while the class of 2022 does not have Respondents with knowledge of the "Less" category.

Table 2 Respondents' Knowledge Levels Based on Aspects of Get, Use, Save and Dispose of all batches of 2022, 2023 and 2024.

Aspects	Total Score	Maximum Score	Percentage	Category
Get	831	1220	68%	Enough
Use	1.171	1708	68%	Enough
Save	1.341	1952	69%	Enough
Throw away	418	732	57%	Enough
Total	3761	5612	67%	Enough

(Source: Primary data, 2025)

Based on **Table 2**, the level of student knowledge about DAGUSIU in the aspect of Get, Use, Store and Dispose of drugs as a whole is in the Sufficient category, with a score percentage of 67% of the maximum score. The Save aspect obtained the highest percentage, namely 69%, followed by the Get and Use aspect at 68% and Discard was at the lowest score at 57%. This shows that good student understanding is in the aspect of storing drugs, while the aspect of drug disposal is still lacking in student knowledge

Table 3 Percentage of DAGUSIBU Knowledge Level per Aspect

Aspects	Question Items	Knowledge Level		
		Good	Enough	Less
Get	5	48%	37%	15%
Use	7	34%	44%	20%
Save	8	27%	40%	29%
Throw away	3	20%	38%	34%

(Source: Primary Data, 2025)

Table 3 shows the distribution of respondents' knowledge levels based on the categories of Good, Sufficient and Insufficient in each aspect. The Get aspect has the highest percentage in the Good category (48%) which shows that almost half of the respondents are able to understand how to obtain the right medicine. In contrast, the Save and Discard aspects show a low percentage in the Good Category, at 27% and 20%, respectively. with the category Less relatively high at 29% in the Save aspect and 34% in the Discard aspect. Meanwhile, the Use aspect has a fairly balanced distribution between the Good (34%), Fair (44%) categories. and less (20%).

Table 4 Questionnaire Question List

No.	Question	Category
How to get medication		
1.	A pharmacy is a place that has a permit to store over-the-counter drugs, limited over-the-counter drugs and hard drugs for sale diluted	Good
2.	Pharmacists are health workers who can serve the purchase of Antihypertensive drugs without a doctor's prescription	Less
3.	Chlorpheniramine maleate (CTM) can be obtained freely at pharmacies and licensed drug stores	Good
4.	Drugs that have warning signs like the picture below are a class of hard drugs that are purchased with a doctor's prescription	Enough
		
5.	One of the pharmacy-mandated drugs (OWA), namely Mefenamic Acid, can be purchased at pharmacies without using a doctor's prescription	Good
How to Use Medication		
1.	Drugs with 3 times a day rule mean that they are taken every 8 hours	Enough
2.	Antacid tablets can be taken with water	Enough
3.	Paracetamol tablets or syrups can be used to lower fever and also relieve toothache	Enough
4.	Dissolved dry syrup can be drunk after the 7th day	Enough
5.	The use of Miconazole Nitrate cream is carried out by applying it thickly on infected skin	Enough
6.	Eye drops are dripped perpendicular to the lower eyelid	Enough
7.	Drug Suppositories shaped like torpedoes can be used through the anus	Enough
How to Store Medication		
1.	Stored medicines should be checked periodically for their expiration date, at least once a year	Enough
2.	Good storage of dried syrup Amoxicilin drug after dissolving is at room temperature (20-25°C) for 14 days	Enough
3.	Liquid medicine such as syrup can be stored in a room with a temperature of about 20°C	Enough

4.	The storage period of eye drops after opening the container for the first time is 1 month	Enough
5.	Eye drops that have been opened can last a long time if stored in a dry, clean and cool place (can be refrigerated at a temperature of 4°C)	Enough
6.	An air-conditioned room with a temperature of 8-15°C (cold temperature) can be used to store eye ointment	Enough
7.	Medicines used by spray (aerosol) can be stored at a temperature of > 30°C (hot temperature)	Enough
8.	Medication Suppositories can be stored at >30° C (hot temperature)	Enough
How to Dispose of Medication		
1.	Obats that have changed color, smell, shape and taste should be discarded immediately even if they have not expired	Enough
2.	Tablets or capsules can be thrown in the trash after being destroyed without having to be put in plastic and mixed with soil/water	Enough
3.	Tubes of topical medications (ointments, creams, gels) should be disposed of separately from the lid in the trash can	Less

Based on the results of the classification of the questionnaire question category, the majority of respondents showed the level of knowledge in the "adequate" category which indicates that basic understanding was not optimal. The category of "good" appears only in certain aspects and "less" appears in questions that require more critical understanding or more technical detail.

DISCUSSION

This research instrument covers four main aspects, namely how to get drugs, how to use drugs, how to store drugs and how to dispose of drugs. An overview of the respondents' level of knowledge in these four aspects is listed in **Table 2**, while the complete list of questionnaire questions can be seen in **Table 4**.

The results of the research on the Get aspect showed that most of the respondents answered correctly on question number 1, which was 218 people (89%) with the Good category. This finding indicates that pharmaceutical health students understand the function of pharmacies as an official means of obtaining drugs according to the rules. However, in question number 2, only 77 respondents (32%) were able to answer correctly so that it was in the Less category, indicating that knowledge about the authority of pharmacists in prescription services is still limited. When viewed as a whole, the Get aspect obtained a percentage of 68% and was classified as Sufficient.

In the Use aspect, the highest number of correct answers was found in question number 1 with a total of 183 respondents (75%) who were in the Sufficient category. This indicates that the respondents understand the rules for the use of drugs. On the other hand, question number 3 was only answered by 44 respondents (18%) with the Less category, which means that most of them still do not know more detailed rules related to drug use. On average, the Use aspect has a 68% correct answer percentage and is in the Sufficient category.

The respondents' knowledge in the Save aspect was highest shown in question number 1 with 184 respondents (75%) in the Sufficient category. This answer shows that respondents understand the importance of checking drug expiration periodically. Meanwhile, question number 2 was only answered correctly by 157 respondents (64%) who were also in the Sufficient category. These results show that knowledge about the storage of liquid preparations such as amoxicillin syrup after dissolution is still not optimal. In general, the average percentage of correct answers in the Save aspect is 69% with the category of Fair.

In the Throw aspect, question number 1 received the most correct answers, namely 170 respondents (70%) in the Sufficient category. This shows that respondents understand enough that drugs that have changed shape, color or smell are not suitable for use even though they have not passed the expiration date. However, question number 3 was only answered correctly by 139 respondents (57%) with the Less category, which indicates that knowledge about the disposal of topical drugs is still less than optimal. Overall, the Throw aspect obtained a percentage of 57% with the Less category.

Based on the results of the research on the level of student knowledge about the DAGUSIBU concept, it shows that the differences between the batches as a whole, the class of 2022 obtained the highest score compared to the 2023 and 2024 batches. This is shown by a larger percentage of scores on the save and discard aspects. In the frequency distribution table, the knowledge level of the class of 2022 has a knowledge level in the Good category of 78% (54 respondents). This shows that most of the respondents of the class of 2022 correctly understood the statements in the questionnaire given. Meanwhile, the 2023 and 2024 batches tend to be in the Sufficient category. This is indicated by the

lower percentage of scores being on the get, use and throw aspects. In the frequency distribution table, the knowledge rank of the class of 2023 has a level of knowledge in the Sufficient category with the highest score of 46% (36 respondents). The class of 2024 has a sufficient level of knowledge, this is shown by a lower percentage of scores in the save aspect. In the frequency distribution table, the knowledge level of the class of 2024 has the highest score which is in the Sufficient category of 43% (42 respondents).

The level of knowledge of Baubau Polytechnic Pharmacy students related to the DAGUSIBU concept showed that most of the respondents were in the Sufficient category with a percentage of 67%. This is in line with the research of Rumi A (2022) which obtained a percentage of 64% in the same category. However, these findings are inconsistent with the research of Sariasih IN (2021) which reported that most respondents were in the Less category. The idea is that health students as prospective professionals in the pharmaceutical field are expected to have a good level of knowledge about DAGUSIBU, so that they can minimize errors in providing information related to how to obtain, use, store and dispose of drugs to patients and the public

COVER

Based on the results of the study on 244 Pharmacy students of Baubau Polytechnic, it can be concluded that the level of knowledge of DAGUSIBU Drugs (Get, Use, Store Waste) Drugs as a whole is in the Sufficient category with a percentage of 67%. Knowledge in the Earn and Use aspects was 68%, Save at 69% and Discard was at the lowest score with a percentage of 57%.

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