

## Counseling on Rational Drug Use (DAGUSIBU) in Sembungan Village, Bangunjiwo, Kasihan, Bantul, D.I.Yogyakarta

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### ABSTRACT

Obtaining, Using, Storing and Disposal of drugs (DAGUSIBU) is part of the Drug Awareness Family Movement (GKSO) initiated by the Indonesian Pharmacist Association (IAI) in achieving understanding and awareness of the rational use of drugs. Community empowerment in Sembungan, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta hamlets aims to: (1) increase public understanding regarding the classification of drugs on the market and their differences (hard drugs, limited over-the-counter drugs, over-the-counter drugs, mandatory drug pharmacies), (2) increase public understanding regarding various types of drug preparations and how to use each to obtain the expected therapeutic effect, (3) increase public understanding regarding procedures for storing and disposing of unused drugs. This service activity uses lecture methods and interactive discussions. Before the speaker delivers the material, the respondent is given a pretest to determine the level of knowledge. While the posttest is given at the end of the delivery of the material to find out changes in knowledge. The pretest results show 64.8% (Enough). After the intervention, there was a change in the level of knowledge to 74.4% (Good). Based on these results it can be concluded that PKK cadres in Sembungan, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta have good knowledge about DAGUSIBU.

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### INTRODUCTION

Indonesian people are now getting used to the use of various types of medicines that aim to cure disease, control it, or as a supplement to support daily activities. This can be caused by various factors such as the development of the disease, the production of various types of medicines and supplements and the introduction of the national health insurance (JKN) as well as the digitization of health care which allows people to more easily get access to treatment (Kementerian Kesehatan Republik Indonesia, 2022).

The use of drugs in the community has a variety of positive and negative impacts (Bertorio et al., 2019, 2020; Damarwati et al., 2023; Fatimah et al., 2022; Fitriani et al., 2021; Hi et al., 2023; Lestari et al., 2021). The positive impact that can be seen is the increasing number of people who have started to care about their health, namely so that they carry out self-medication to health service providers both in person and online. Meanwhile, the negative impacts that may arise with the increasing use of drugs in society are errors in obtaining, using and disposing of drug waste. This can happen due to a lack of knowledge and information

conveyed to the public regarding the proper and correct use of drugs. Errors in drug use can cause harm to society and the environment.

One way to manage drugs properly and correctly is to implement the DAGUSIBU (Obtaining, Using, Storing and Disposal of drugs). The program initiated by the Indonesian Pharmacist Association is one of the efforts to improve health for the community which is organized through health service activities by pharmaceutical personnel, especially pharmacists.

Research by Bertorio et al., (2020) found that there was an increase in the number of people who were in the very knowledgeable group of 22.59% indicating that providing community empowerment interventions in the correct use of drugs (DAGUSIBU) can increase community knowledge in Padukuhan Karang Tengah, Nogotirto, Gamping, Sleman, Yogyakarta (Bertorio et al., 2020). In contrast to this, there are still many people who do not understand how to store and dispose of medicines at home (Lutfiyati et al., 2017).

Pharmacists as health professionals who care/concern about the use of drugs in the community are encouraged to continue to conduct DAGUSIBU counseling anywhere so that the public understands the correct use of drugs so that the goals of treatment can be achieved and does not have an impact on environmental damage due to the wrong disposal of drug waste.

## METHOD

The approach method used to support the realization of this Community Service activity includes:

- a. Approach with the head of RT 05 Sembungan, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta to provide information and permits to proposers to carry out Community Service.
- b. Observasi awal kondisi lapangan dan lingkungan untuk mengetahui situasi riil lokasi dan memetakan daerah sasaran bidang terkait pengabdian kepada masyarakat Preliminary observations of field and environmental conditions to determine the real situation of the location and to map the target areas for fields related to community service
- c. The training was carried out by providing materials and direct discussions with the community. Training materials were delivered at community meetings and followed by discussions and questions and answers from the community. The material that will be delivered is the correct use of drugs (DAGUSIBU), knowledge of how or where to get the right drugs and then how to use them after they are purchased or prescribed. Drug storage procedures are very important in maintaining the good condition of drugs while in the hands of the community. Incorrect storage will cause damage to the drug more quickly. Drugs that have been damaged or expired should not be thrown away carelessly. Community knowledge is needed on how to properly dispose of drugs in order to avoid environmental pollution and drug counterfeiting. In this counseling service, the level of public knowledge will be measured using the pre and posttest related to DAGUSIBU. Measuring the level of knowledge using good, sufficient and less categories with percentages. Arikunto (2010) categorizes a person's level of knowledge into three levels based on the percentage value, namely as follows (Arikunto, 2010):
  - 1) The level of knowledge is in the Good category if the value is  $\geq 76-100\%$ .
  - 2) The level of knowledge is in the Enough category if the value is  $60-75\%$ .
  - 3) The level of knowledge is in the Less category if the value is  $\leq 60\%$ .
- d. Community assistance in forming cadres or Agents of Change (AoC) to train the community to be able to independently improve the quality of life and health in their environment.
- e. Distribution of door prizes to participants who can answer questions related to the socialization material that has been presented about the use and handling of drugs.

## RESULTS AND DISCUSSION

Service activities with outreach to the community on the Correct Use of Drugs (DAGUSIBU) were held on Sunday, 28 May 2023 in Sembungan Hamlet, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta. A total of 27 participants attended this activity consisting of PKK cadres ( $n=20$ ; 74%) and village officials ( $n=7$ ; 26%). Photos of the counseling participants can be seen in Figure 1. The demographic characteristics of the respondents who took part in this counseling can be seen in Table 1.

Based on Table 1, most of the respondents in this activity had an age range of 40-49 years of 59% or 16 respondents with the highest level of education, namely Senior High School of 44% or 12 respondents.



**Figure 1. DAGUSIBU Counselling Participants**

**Table 1. Demographic characteristics of respondents**

Characteristics	Quantity (n)	Percent (%)
Sex:		
Men	7	26
Women	20	74
Age, years:		
<20	2	7
20-29	2	7
30-39	4	15
40-49	16	59
50-59	2	7
>60	1	4
Education:		
Junior High School	2	7
Senior High School	12	44
Associate Degree	4	15
Bachelor Degree	5	19
Not follow	4	15

The activity began with participants filling out a questionnaire (pretest) to measure the level of community knowledge about DAGUSIBU. Furthermore, the pharmacist gave an explanation about the meaning of the DAGUSIBU acronym, a safe and legal place to buy drugs, namely pharmaceutical facilities (pharmacies, health centers, hospitals, main clinics, drugstores) and drug classification. There are four classifications of drugs accompanied by their respective symbols/logos, namely over-the-counter drugs, limited over-the-counter drugs, hard drugs, and narcotic drugs. The participants were emphasized regarding the differences in each of these drug classes and how to get them, warnings, whether or not a doctor's prescription is mandatory. Explanation regarding the classification of limited over-the-counter drugs, hard drugs and narcotics is emphasized in the "Five O Questions" proposed by Pharmacists and the Ministry of Health of the Republic of Indonesia through the Movement of Smart People Using Drugs (GeMa CerMat) which includes:

1. What is the name of this medicine and its ingredients?
2. What are the benefits of this medicine?
3. How many doses of this drug?
4. How to use this medicine?
5. What are the side effects of this drug?

Explanation regarding the use of antibiotics and psychotropic drugs and narcotics places more emphasis on the function of drugs in general, frequency and duration, do not share drugs with others as well as side effects and dangerous drug interactions that may be caused if consumption is not in accordance with what it should be. In addition, it also explained about the classification of traditional medicines consisting of herbs, standardized herbal medicines and phytopharmaca. The participants are expected to be able to understand the

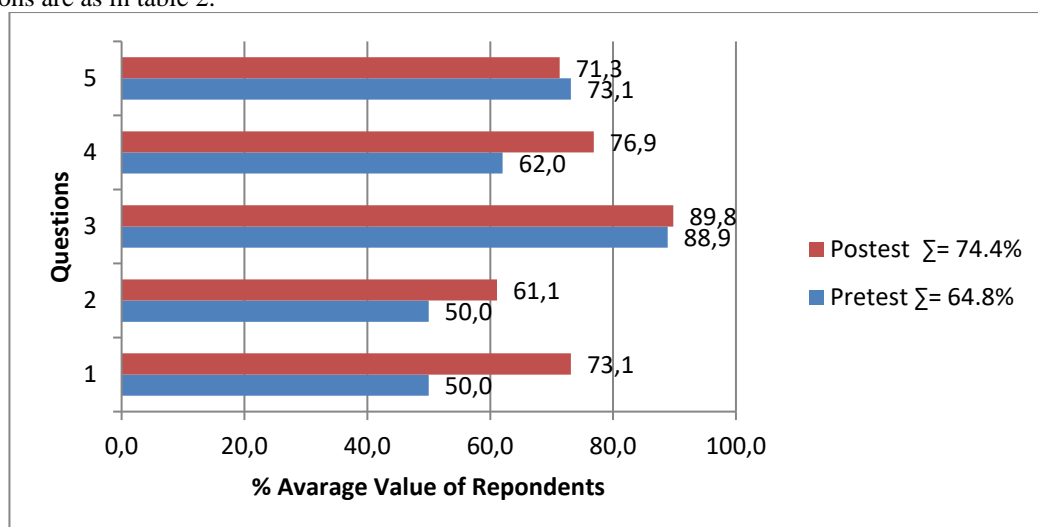
types of drug classification so that they can distinguish each type of drug to be purchased. The following is a photo of the DAGUSIBU outreach activity (Figure 2).



**Figure 2. DAGUSIBU Socialization Activities**

Explanations are also related to storing drugs properly and disposing of drugs properly. Keep the drug in the original packaging and in a tightly closed container. Do not remove the label because it contains usage instructions. Store the medicine in a cool, dry place away from direct sunlight or according to the instructions on the package. Medicines are stored according to their dosage forms. Medication must be discarded if the drug has expired and the drug is damaged. Causes of damaged drugs due to damp air, sunlight, temperature and physical shock with signs of changes in color, smell and/or taste; broken, cracked, perforated form, into powder; capsule/powder/tablet moist, soft, wet, sticky; liquid/ointment/cream becomes cloudy, thickens, precipitates, separates, hardens and spots, spots, gas appear. To avoid misuse of damaged/expired/used medicine containers, 1) Plastic bottles/pots: remove the labels and open the lids of the bottles/pots first, then throw them in the trash. 2) Box/dos/tube: cut first, then throw it in the trash. Drugs can also be disposed of by 1) Opening the packaging, then burying it deeply, 2) Burning it, make sure burning destroys all the medicine.

The results of the respondents' pretest and posttest can be seen in Figure 3. The results of the knowledge level of the people of Sembungan Hamlet RT 05, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta about DAGUSIBU are categorized as having good results with 5 questions given through a questionnaire. The questions are as in table 2.



**Figure 3. Pretest and Posttest Results of Respondents**

**Table 2. Distribution of Respondents Knowledge Pretest Answers about DAGUSIBU**

No	Questions	Correct (%)	Incorrect (%)
1.	Avoiding using leftover syrup that has been open and stored for a long time is one way to use medicine safely and correctly.	50.0	50.0
2.	Hard drugs classes are purchased at the Pharmacy.	50.0	50.0
3.	Medication by drinking 3 times a day is taken after breakfast, lunch and dinner.	88.9	11.1
4.	Antibiotic drugs must be taken until they run out.	62.0	38.0
5.	All syrup medicines are stored in the refrigerator.	73.1	26.9
	Average	64.8	

**Table 3. Distribution of Respondents Knowledge Posttest Answers about DAGUSIBU**

No	Questions	Correct (%)	Incorrect (%)
1.	Avoiding using leftover syrup that has been open and stored for a long time is one way to use medicine safely and correctly.	73.1	26.9
2.	Hard drugs classes are purchased at the Pharmacy.	61.1	38.9
3.	Medication by drinking 3 times a day is taken after breakfast, lunch and dinner.	88.9	11.1
4.	Antibiotic drugs must be taken until they run out.	76.9	23.1
5.	All syrup medicines are stored in the refrigerator.	71.3	28.7
	Average	74.4	

**Table 4. Comparative Analysis of the Distribution of Respondents' Knowledge of Pre and Posttest Answers about DAGUSIBU**

No	Questions	Sig. (2-tailed)	P value
1.	Avoiding using leftover syrup that has been open and stored for a long time is one way to use medicine safely and correctly.	0.002	<0.05
2.	Hard drugs classes are purchased at the Pharmacy.	0.025	<0.05
3.	Medication by drinking 3 times a day is taken after breakfast, lunch and dinner.	0.806	>0.05
4.	Antibiotic drugs must be taken until they run out.	0.005	<0.05
5.	All syrup medicines are stored in the refrigerator.	0.846	>0.05

The results in tables 2 and 3 show that there is a difference in knowledge between before being given the material (64.8%) and after being given the material (74.4%) about DAGUSIBU. This is in line with research by Ramadhiani et al. (2023) that providing education has a significant effect on increasing knowledge about DAGUSIBU (obtain, use, store and dispose of) drugs which can be seen from the results of the significant ( $p=0.00$ )  $<0.05$  (Ramadhiani A.R., Paradilawati C.Y, 2023). Based on this, it can be seen that education about DAGUSIBU drugs and simulations on how to use and manage drugs can increase public knowledge in order to improve the health status of the community and drug-aware families. (Suryoputri & Sunarto, 2019).

Based on age, at this service it was shown that the age of 40-49 years had a good level of knowledge. The higher the age, the better the level of maturity and strength in thinking and working (Karis Allen et al., 2021). Trust will also generally be higher given to people who are older. Environment, socio-culture, social systems and culture in society can also influence knowledge. These things can affect attitudes in receiving information, so that the provision of information that will be conveyed to the public needs to pay attention to this. Providing clear and reliable information can increase one's knowledge (Birkhäuer et al., 2017; Esmalipour et al., 2021).

## CONCLUSION

Based on the results of educational outreach activities and drug demonstration simulations along with evaluation of test results both pretest and posttest, it can be concluded that these activities can increase knowledge, skills/abilities, awareness of the importance of managing drugs at home to reduce the incidence of counterfeit drugs and side effects of using damaged drugs / expired in the community of Dusun Sembungan, Bangunjiwo, Kasihan, Bantul, D.I Yogyakarta.

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