



Counseling on the Introduction of Safe Syrup on the Knowledge Level of the Community at Kalisoka Village

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Abstract: Health is the most important aspect in people's lives. One of the efforts made in maintaining the health is by doing self-medication which is defined as an effort to cure themselves and can cause problems if they have limited knowledge. Delivering information on how to store and the time limit for using medicine after the packaging is opened is one of the responsibilities of pharmaceutical personnel which is important to know. One of the most widely used medicine by the public is syrup. Self-medication is widely practiced in the community to treat diseases or symptoms of diseases by buying drugs at pharmacies or drug stores so that they need clear information to make decisions about the type and amount of drugs to be used and how to use them correctly. To increase the community knowledge on choosing and giving safe syrup, it is necessary to conduct counselling on the introduction of safe syrup. The activity was given to the PKK mothers and cadres at Kalisoka village Tegal regency. It used pretest and posttest to take the data. After the activity, the result showed that the participants had enthusiasm and the knowledge increased.

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INTRODUCTION

Health is one of the most important things in life. If someone is getting sick, he/she will try to get healthier (Efayanti, Susilowati, & Imamah, 2019). People's efforts to treat themselves are known as self-medication or swamedication (Chusun & Lestari, 2020). The prevalence of self-medication among the public to overcome symptoms or health complaints that are considered mild based on data from the last 3 years in Indonesia tends to increase from 2020-2022. Based on data from Central Statistical Agency in 2020 on health indicators of the Indonesian, it is known that the data obtained about self-medication by the Indonesian people from 2020 to 2022 for self-medication was 71.19% in 2020, 84.23% in 2021 and the last data in 2022 also slightly increased as much as 84.34% (BPS, 2022). This data shows that there are still many people who do self-medication compared to seeing a doctor.

Self-medication is defined as the use of medicines, herbs or home treatments on one's own initiative or on the advice of others without consulting a doctor. The activity is growing. Around the 1960s, the activity was considered an unnecessary and potentially unhealthy practice by the western medical world. This was due to the paternalistic approach of western medicine which only treats disease (not disease prevention or health maintenance) (Sayuti et al., 2022). Self-medication is included in health efforts which

means every activity to maintain and improve health, aiming to realise optimal health status for the community. One of them is the introduction of the use of medicine by pharmaceutical personnel. Medicine is a biological product used to influence or investigate physiological systems or pathological conditions in the context of determining diagnosis, prevention, healing, recovery, health improvement and contraception, for humans (Permenkes RI, 2016). Every medicine has benefits and adverse side effects. Therefore, use medicines in accordance with the rules of use (Badan POM, 2015).

Drug abuse usually occurs because the mechanism of action of a medicine results in side effects (Badan POM, 2015). The types of drugs in circulation vary greatly such as tablets, capsules, syrups, and others. One of the most widely used drugs by the public is syrup. Syrup is one of the liquid preparations that must be considered for stability (Jaya Putri et al., 2021). Based on the research that has been conducted, it states that the results of a preliminary survey on drug management, many people generally overcome their illness with self-medication because it is cheaper, closer, the influence of advertisements or advice from friends, family, and neighbours, however, it is not appropriate. There are also many people who do not understand how to store and dispose of medicine at home (Lutfiyati, H., Yuliatuti, F., & Dianita, 2017). This needs to be a concern because the level of community knowledge can affect the use of good and correct medicine, so that it is necessary to have correct information for the community (Hussain, 2017). The service carried out is to provide pamphlets to the community of Kalisoka village as a form of socialisation media regarding the use of syrup, and a questionnaire containing participants' understanding about the use of good and correct syrup.

METHOD

The IPTEK for the community (IBM) program entitled "Counselling on the Introduction of Safe Syrup to the Knowledge Level of PKK Mothers and Cadres at Kalisoka Village, Tegal Regency" was conducted because many people do self-medication due to several factors, including widespread information and advertisements related to over-the-counter drugs and limited over-the-counter drugs that can be easily found on the market. Thus, it causes self-medication for complaints of several diseases is easier to do because it is relatively fast, cost-effective, and practical without the need to see a doctor (Yusrizal, 2015). The community service has been organised face-to-face and attended by 35 PKK mothers and 35 cadres at Kalisoka village Tegal regency. The activity was held at the Kalisoka village Administrative Office. The methods used in delivering the material were lecture, question and answer session, and discussion.

1. Involvement of other parties in implementation the program

The community service was conducted by lecturers of Bachelor in Pharmacy, Faculty of Health Sciences, Bhamada Slawi University assisted by students in doing preparation, implementation, and arranging the report. The partners of the implementation of community service were PKK mothers and cadres at Kalisoka village Tegal regency numbered 70 participants.

2. Implementation

The activity was carried out in stages of implementation:

- a. Making an announcement poster with the theme "Counselling on the Introduction of Safe Syrup to the Knowledge Level of PKK Mothers and Cadres at Kalisoka Village, Tegal Regency".
- b. Arranging material about the knowledge on the use of syrup.

- c. Providing the materials by presenters on handling the use of syrup properly and correctly through self-medication, and preparing educational media in the form of powerpoints and illustrated posters or pamphlets.
 - d. Delivering quiz before and after the material given by using the questionnaire method.
3. Description changes that will occur in society
- From the activities, it is expected that the knowledge of the participants about safe self-medication of syrup increases. Also, the participants can accept clear and correct information about how to use syrup properly.
4. Maintaining program sustainability
- To maintain the continuity of the program, the provision of PIO as a self-medication process in the form of syrup should be based on SOP and implemented in services places such as pharmacies, clinics, and hospitals.
5. Evaluation
- This was done by arranging a questionnaire containing questions about whether participants understand the selection of children' syrup with safe additives. The function was that the participants did not feel worried and can choose their own OTC syrup or limited OTC syrup for self-medication.

RESULT AND DISCUSSION

The activity consisted of explaining material related to introduction and the use of syrup. At the beginning and the end of the activity, the participants got pre test and post test to find out the understanding level before and after giving the explanation by the presenters.



Picture 1. Counselling on the Introduction of Safe Syrup Medicine

Counselling activities on the use of good and correct medicine were followed by 70 PKK mothers and cadres in Kalisoka village. The mothers are agent of change in their family. Besides that, the number of residents at Kalisoka village as housewives is quite high and has an average education of high school so that it is necessary to provide assistance in the use of good and correct medicine. Thus, the mothers can manage their households into families that are appropriate and healthy in the use and management of medicine. The evaluation was carried out through knowledge assessment before and after the participants received the material. It aimed to find out the effect of educational activities on the participants' knowledge related to the safe use of syrup. Data were collected by using questionnaires that had been distributed to the respondents.

First session: Pre-test

The activity was carried out at 8 am and opened by singing Indonesia Raya. After that, a pre-test was carried out before the event began. It aimed to determine the knowledge level of the participants. The pre-test checked the knowledge on how to administer, use, store, and dispose of syrup properly. It needed to do because the knowledge level of the community can influence the use of syrup properly and correctly, so that it is necessary to have the right information for the community (Hussain, 2017).

Second session: Providing materials using powerpoints and pamphlet

The methods used were lecture and discussion. Lecture method by delivering materials continued with question and answer session is effective to increase the knowledge especially in proper and correct drug management (Yati et al., 2018). Community involvement is also an effective method that uses *Cara Belajar Insan Aktif (CBIA)*, this educational method can indirectly change behavior and help achieve the desired goal (Nurafni et al., 2019). It is about how to get medicine, use syrup medicine, store the medicine, and dispose of syrup medicine properly and correctly.



Picture 2. Explaining the Materials

The first material was about how to get the right medicine by buying the medicines through healthcare facilities, pharmacy, or the safety of licensed drug stores guaranteed by the pharmacist or pharmaceutical technical staff in charge of the facility, who have obtained a pharmacy service practice license. We have to pay attention in purchasing medicine like avoid purchasing medicines from unofficial facilities or unlicensed drug retailers, including through online media. Then, ensure that the medicine received at the time of purchase or from a health care facility has packaging and condition of the medicine that is in good condition and intact. Pay attention to these things for medicines with a doctor's prescription like completeness of information on the etiquette: patient's name, date and rules of use. When getting medicine, read carefully and pay attention to the information on the medicine packaging before use such as name of the medicine, content of the medicine, indication, rules of use, contra-indication, and possible side effects of the medicine that can harm the patient.

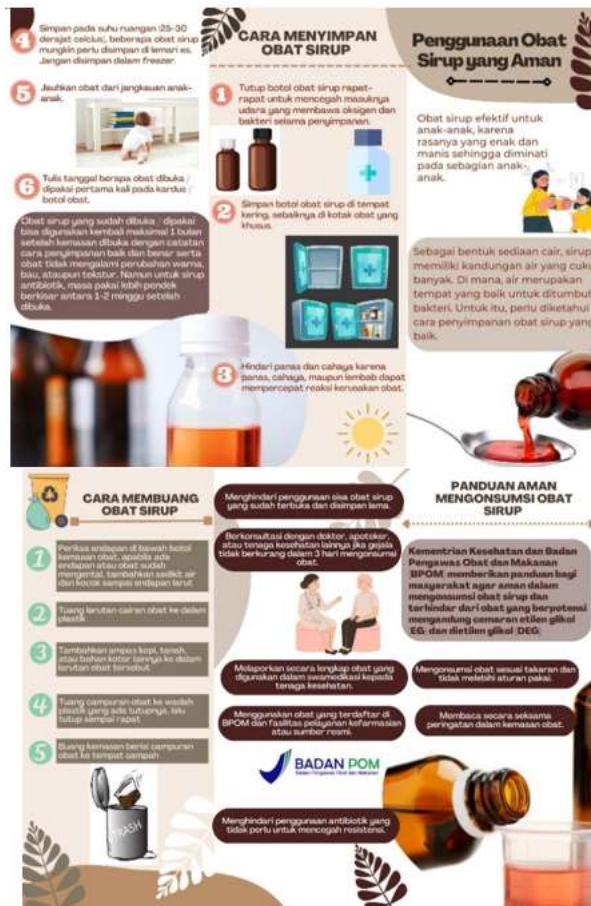
The second material was how to use syrup drugs. The drugs must be consumed appropriately in order to achieve treatment goals and avoid new health problems. The presentation began with the rules of use, drug dosage, and discussed the difference between Beyond Use Date (BUD) and Expired Date (ED). BUD is the limit for using medicine after the packaging is opened. The time limit for using a medicinal product can be longer, shorter, and the same as the ED. Usually, the BUD is not necessarily listed on the

packaging of a medicinal product but the ED will always be listed on the packaging of a medicinal product because the ED is an important information listed by the pharmaceutical company regarding the time limit for the use of medicinal product after the product is produced. In the community service, PKK mothers from Kalisoka village did not know even entirely about the time limit for using a medicinal product was opened from its packaging. Information about BUD is still very taboo because it is rarely conveyed; health workers usually only tell about ED. However, BUD information is just as important as ED information. When it is explained, it will be accompanied by information on drug storage and drug management.

The third material was providing knowledge to the community about good drug management like good storage of medicinal products and for damaged/expired date of the medicinal products that need to be supported because it is to prevent the community from negative impacts. Examples of good drug storage such as drugs should be stored in a cool place at 25°C or 25-30°C or in normal room temperature. Medicines stored at 2-8°C should be refrigerated, not in the freezer. Drugs in liquid form should not be stored in the refrigerator (freezer) so it cannot be freeze unless mentioned on the drug packaging (Muhammad Afqary et al., 2018). It should be stored at room temperature to maintain the stability of the syrup. For the type of insulin, it is recommended to be placed at a refrigerator temperature of 2-8 degrees; if it is opened at a room temperature less than 30° it is not recommended to put it in the refrigerator again. The dry syrup also has different storage; some must be stored at refrigerator; there are put at the room temperature only; so that we need to determine the information on the drug (Zahra Adiyati, 2022). We have to store the medicines in the original packaging and tightly closed. Also, don't place the medicines in a car for a long time because of the unstable temperature that can damage the medicines. Then, we have to pay attention to signs of drug deterioration in storage such as discoloration, odor, and clumping of the syrup texture. Damaged medicines should be discarded immediately. The other things are that we do not remove the etiquette on the medicine container as it contains important information about the medicine, follow the storage rules on the packaging, and put the medicines out of the reach of children.

The fourth material was about how to dispose of syrup drugs, in households. Drugs must be disposed of in the right way, so as not to damage the environment and ecosystem and not be used by irresponsible people to be used or traded again. How to properly dispose of the medicines in household: 1. Separate the contents of the medicine from the packaging; 2. Remove all labels from the medicine container; 3. Discard the medicine packaging (boxes/other wrappers) after tearing or cutting it; 4. Dispose of the syrup contents into the sewer (latrine) after dilution for non-biotic liquids and for antibiotic liquids dispose of the contents together with the container by removing the label into the bin; 5. Crush the bottle and dispose of it in the rubbish (Infodatin, 2019).

From the provision of this information in the form of socialization, it is expected that it can provide insight into good drug management and can be applied in the daily life of the community in general. The main target of this community service socialization is housewives because it plays an important role in the family. Decision-making and determining the quality of good family health is housewife. Housewives are usually more sensitive, more careful, and more selective in choosing a medicinal product if there is one of their family members who experience health problems.



Picture 3. Pamphlet of Syrup

Furthermore, the provision of material through pamphlet media as a socialization tool given to community service participants so that it will help pharmaceutical workers/pharmacists and patients, especially when self-medication is carried out, to be more effective in solving health problems and treatment so that the quality of life of patents can be improved. The information in the pamphlet can also be useful for the local community. Detailed drug information needs to be known, including the composition of the drug, the rules for consuming the drug, the time to take the drug and how to store the drug. There is important information like the Distribution Permit Number (DPN); it indicates that the drug has a distribution permit from the Indonesian government and is guaranteed to be safe, quality, and efficacious. The drug expiry period is a period of time that shows that this drug is still suitable for use, still safe for consumption and efficacious. In writing the expiry period on the drug packaging, it is usually in the order of date in the form of number, month, and year. The month is usually written in the form of number or letter abbreviating the name of the month. The year is in the form of numbers. Warning signs and attention are things that need to be considered when consuming drugs, for example, *this drug is not good to use when driving*. The next material is about drug storage. This understanding is given to participants to understand that each drug has characteristics so that the storage is different. The medicine packaging itself already contains information on how to store the medicine. Damaged drugs, expired drugs, unused drugs are included in the pharmaceutical waste category and are different from other household wastes because they are included in medical waste with hazardous and toxic materials. The drug

management is different from the usual household waste. It can lead to accidental poisoning, drug abuse, and worst of all; it can be a source of counterfeit or illegal drugs.

The uptake of information on the correct steps in disposing of medicines is influenced by the characteristics of age, employment status, and history of the recipient of information, which have a close relationship with attitudes towards the issue and handling of unused medicines. Thus, it requires the intervention and active role of doctors, pharmaceutical workers, health workers to change people's attitudes to pay more attention in disposing of unused drugs. Their roles are very important in providing knowledge to the community on the issue of handling unused drugs, expired drugs, and damaged drugs. Besides being able to help educate the community, this active role also helps the Indonesian government in the unused drug handling system in the community's living environment. This community service activity is expected to have a real impact on health workers in the village environment in handling and disposing of pharmaceutical waste in the community which is still not well understood. After participating in this activity, participants can immediately practice and apply it in their daily lives regarding the governance of the pharmaceutical waste disposal in accordance with the recommendations for handling toxic and hazardous waste. The community can also be better, more selective about drugs, pay attention in obtaining drugs, storing drugs, and disposing of drugs that are no longer used or have expired. In addition, the information is expected not to stop at the participants but it can spread widely to various parties in the general public.

Third session: Question & answer

Question and answer is a method of presenting a discussion between the audience and the speaker. It is one of the ways to stimulate the audience's interest and understanding in obtaining information as clearly as possible and a more detailed exploration of a topic from the resource person. In this activity, the participants asked some questions related to the materials given. The participant asked where she got the right medicine. The answer was the participant should go to a drugstore that has a license such as a pharmacy to avoid the acquisition of counterfeit drugs that can harm consumers. Next, the question was about the use of drugs. The participants can analysis by themselves, called by self-medication, the complaints experienced which are usually in the minor illnesses such as cough, cold, fever, stomach ulcer, diarrhea, and others. Self-medication is chosen to improve the affordability of treatment, especially in terms of cost. However, it has negative impact due to limited knowledge about the use of drugs like the content of the drug, the dosage, the side effect, and who the consumers can use the drugs. Thus, there must be a role for health workers in providing information and knowledge to avoid drug abuse and drug misuse. In this activity, the participants were given information on the packaging of a drug product, warning signs on drug packaging, etiquette and drug brochures. It makes the participants to be more careful in reading the information related to the use of drugs and warning signs contained in the packaging of a drug product, etiquette and drug brochures.



Picture 4. Question and Answer Session between Participant and Presenter

To find out the participants' understanding about the storage and disposal of expired drugs, several questions were asked to them such as where they get the medicines. The results were from pharmacies, grocery stores, minimarkets and stalls. This shows that the participants have practiced self-medication, which is by buying medicine without a doctor's prescription and without consultation or supervision by a doctor. Based on the condition, it is very important to conduct socialization activities on the safe use of medicines. For the second question was the use of drug preparation, for example tablet and syrup. The result was that most of the housewives did not know how to use these drugs correctly and safely; most of them also did not understand the dosage in giving medicine to take. The third question was about drug storage, as an activity of storing and maintaining by placing the drugs received in a place that is considered safe from theft and physical disturbances that can damage the quality of the drug (Muhammad Afqary et al., 2018). From this question, the average participants' answer was to store the medicine in the refrigerator and on the table that can be easy reach of children. There is incorrect answer so that speaker re-explained that the medicines should be stored in the box and should not be placed on the table. The fourth question was related to the disposal of medicines that were no longer in use. Most of the answers obtained from the participants were to leave the medicine as an example when buying it again by placing the medicine in a place that is easily accessible to children. Some of them answered the question by throwing the medicines directly into the trash without carrying out the appropriate drug disposal procedure. From the answers obtained from four questions posed to the participants, it can be concluded that the participants are still lack in the understanding of drug storage.

1. The community should avoid purchase medicines from unofficial facilities that are not authorized as medicine retailers including through online media. Purchasing medicine through a licensed health care facility, pharmacy, or drug store will be guaranteed by the pharmacist or pharmaceutical technician in charge of the facility who has obtained a license to practice pharmaceutical services.
2. The syrup must be used appropriately in order to achieve treatment goals and avoid new health problems. This should be understood by the public before using the medicine, by asking the pharmacist or pharmaceutical technician when taking the medicine at the pharmacy or reading the information on the medicine packaging or other reliable sources of information.

3. Storage is one of the factors that need to be considered because the quality of the medicine can be damaged if the medicine is stored incorrectly. In households, medicines should be stored in the correct way, according to the storage instructions on the medicine packaging. This is performed to avoid the occurrence of drug damage during storage, so that the drug can still have an effect according to the purpose of treatment. Medicines should be stored at room temperature unless specifically stated for certain preparations such as suppositories which must be stored in the refrigerator. The participants still had many mistakes in drug storage, which can result in unwanted things in the use of drugs so that it can be detrimental to the community when using drugs (Purwidyaningrum, 2019). The participants stored a lot of syrup in the refrigerator without knowing the side effects that will occur or the feasibility of syrup in the storage process. It can be seen from the texture of the syrup that begins to thicken and the smell is different.
4. Medicine must be disposed of the right way so as not to damage the environment and ecosystem and not to be used by irresponsible parties to be used or traded again. The medicine packaging should be disposed in boxes or other packages, after tearing or cutting. The contents of syrup are also disposed into the sewer (latrine) after diluted. Then, the bottle should be crushed and thrown in the rubbish.

Fourth session: Post-test

The post-test itself is used to measure the level of understanding of PKK mothers and cadres in Kalisoka village containing some questions about how to use safe syrup. Before given the materials, the participants have also done pretest. The following is a graph of the level of knowledge of PKK mothers and cadres in Kalisoka village before and after the explanation.



Picture 5. The Result of Pre-test and Post-test

The average pre-test score was 45% and 81% for post-test; it means that there is an increase on the knowledge level as much as 36%. On the other hand, PKK mothers and cadres in Kalisoka village have understood well on how to get, use, store, know expiration period, and dispose of syrup properly and correctly.

CONCLUSION

The activities of the IPTEK for the community program “Counselling on the Introduction of Safe Syrup on the Knowledge Level of PKK Mothers and Cadres in Kalisoka Village, Tegal Regency” have been carried out smoothly and can increase the participants’ insights on how to get medicines, consume syrup, store syrup, and dispose of syrup safely. This community service activity is conducted in several stages like making an announcement poster, compiling the material, and arranging education media by

powerpoints and pamphlets. Also, the participants fill out quizzes before and after being given material using the questionnaire method. The participants had enthusiasm in participating in a series of events and increased the average post-test score by 36% from the pre-test score.

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