

Education on the Use of Over-the-Counter Drugs as Preventive Health for Students at SMP Muhammadiyah 2 Kediri

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Abstract: *This community service activity was conducted on September 20, 2024, to raise awareness among students about the safe and responsible use of over-the-counter (OTC) medications. The primary objective was to educate students on the types of OTC medications available, their proper use, potential side effects, and the importance of reading medication labels. The event involved 20 students, comprising 4 from Grade 8, 7 from Grade 9, and 9 from Grade 7, who actively participated in interactive discussions and Q&A sessions. The educational session was delivered using a combination of presentations, visual aids, and real-life examples to enhance comprehension. A post-activity evaluation through a quiz was conducted to assess the participants' understanding of the material. The results showed an average quiz score of 82.3%, with an accuracy rate of 87.6%, indicating a significant improvement in the students' knowledge of OTC medication use. The activity also included discussions on the importance of adopting healthy lifestyle habits as a preventive health measure, which resonated well with the students, reflecting their growing interest in maintaining overall health.*

INTRODUCTION

The increasing rate of self-medication use in the community is a phenomenon that needs serious attention. The development of information technology and easy access to various sources of health information has encouraged people, including students, to make decisions related to medication independently (KEMENKES RI, 1993). Low levels of health literacy, especially in terms of the use of *Over-the-Counter* (OTC) drugs, can pose a significant risk (Kristina, S.A., 2020).

One group that is vulnerable to medication errors is adolescents, especially students at the junior high school level. The lack of formal education related to pharmacy and health at this age makes them a priority group to be given adequate assistance and understanding (Kurniasih, N., 2022). *Over-the-counter* (OTC) medicine is a type of medicine that can be obtained without a

doctor's prescription and is often used as a first step in treating minor complaints. These types of drugs, such as analgesics, antacids, antihistamines, and cold medicines, are widely sold in pharmacies, minimarkets, and even grocery stores. Although easily accessible, the use of OTC drugs requires a proper understanding of dosage, indications, contraindications, side effects, and potential drug interactions (Pujianto, A., 2017). Without adequate education, inappropriate use can lead to new health problems, such as drug resistance, allergic reactions, and overdose. This phenomenon is exacerbated by the proliferation of invalid or misleading health information, which is easily accessible through social media and the internet. This further emphasizes the importance of evidence-based education delivered directly to the younger generation (Hastuti, E.D., 2019).

SMP Muhammadiyah 2 Kediri was chosen as a community service location because this institution has a large number of students and has the potential to become a strategic target for improving health literacy (Sari, D.P., 2020). Based on initial observations, it was found that most students did not understand the basic concepts of safe and rational drug use. They tend to rely on information from family, friends, or even advertisements, without knowing the validity of the information (Wulandari, S., 2017).

Students who are not accustomed to reading drug labels or paying attention to important information such as composition, how to use, and expiration date. This reflects the need for comprehensive and structured educational interventions to increase their awareness and understanding (Amanda, M.P., 2017). Education on the use of OTC drugs has a very important preventive value, especially to reduce the risk of drug misuse in the future. Health literacy instilled early on can form good habits that are sustainable until they grow up (Bachtiar, A., 2021). With a good understanding, students can become agents of change who spread the right information to their families and surroundings. In addition, this kind of education is in line with the government's efforts to improve the quality of public health through the Healthy Living Community Movement (GERMAS) program, one of which focuses on the wise use of medicines (Hidayat, I.R.S., 2015).

This community service activity is designed to provide education in an interactive and interesting way, using a problem-based learning approach and simulation (Ministry of Health, 2019). The material presented includes an introduction to the types of OTC drugs, how to read drug labels, understand side effects, and steps to take if unwanted effects occur (Pratiwi, Y., 2020). This activity also aims to train students to be more critical in filtering health information they receive from various sources (KEMENKES RI, 2019). Through this program, students at SMP Muhammadiyah 2 Kediri are expected to understand the importance of rational and safe drug use. As their health literacy increases, the risk of medication errors can be minimized, and they will be well-equipped to take care of themselves and those around them (WHO, 2014). This community service not only provides direct benefits for students, but also becomes the first step to creating a more health-conscious society in the future (BPOM RI, 2018).

METHODS

This community service was conducted at SMP Muhammadiyah 2 Kediri on Friday, September 20, 2024, from 09.00 to 11.00 WIB, with the aim of providing a better understanding of the use of over-the-counter (OTC) drugs as part of preventive health efforts among students. This activity focused on raising awareness about the importance of using drugs appropriately,

safely, and responsibly to maintain health, as well as preventing drug abuse that could have negative impacts.

Activity Preparation

Before the activity began, the community service team consisting of lecturers and pharmacy students coordinated with the SMP Muhammadiyah 2 Kediri school to ensure the right schedule and location. This activity was held in a classroom that had been prepared by the school, with a capacity of about 50 participants, consisting of students in grades VIII and IX. In addition, the educational material to be delivered has been prepared in advance, focusing on the preventive aspects of using OTC drugs for mild health conditions, such as headaches, coughs, or flu.

Activity Implementation

On the day of implementation, the activity began with remarks from the school who opened the event and welcomed the presence of the community service team. After that, the education session by the service team began. The material was delivered using presentation media containing information about various types of OTC drugs commonly found on the market, such as analgesics (painkillers), antipyretics (fever reducers), antitussives (cough medicines), and decongestants (drugs for nasal congestion). The discussion began with an explanation of the characteristics of OTC drugs that can be purchased without a doctor's prescription and how to choose the right drug based on the symptoms experienced.

During the education session, the importance of reading labels on OTC medicine packages, understanding the correct dosage, and recognizing side effects and contraindications that may arise were also explained. The use of OTC drugs that are not in accordance with the dosage and indication may risk causing side effects or interactions with other drugs, which could potentially harm health. Therefore, education on how to choose OTC drugs that are safe and suitable for the body condition is very important.

Method of Delivery

To increase students' understanding and engagement, this activity was conducted using an interactive approach. The service team used case studies relevant to the students' daily lives, such as how to deal with headaches after studying or a mild cold during the rainy season. In addition, a question and answer session was organized to give students the opportunity to ask questions directly about the topics presented. This aims to ensure that the educational messages are well received by the students and they feel more confident in making decisions regarding the use of OTC drugs.

In this interactive session, the service team also invited students to discuss their experiences related to the use of OTC drugs, both appropriate and inappropriate. Based on this discussion, the service team provided further explanation about common mistakes that are often made in the use of OTC drugs, as well as how to prevent them.

Use of Props

To facilitate understanding of the material, the service team also used props in the form of examples of OTC drug packaging commonly found on the market. Each participant was given the opportunity to see firsthand how to read labels, recognize drug content, and understand the information on the packaging. This is intended to familiarize students with how to read information on drug packaging carefully, so that they can choose drugs more wisely.

Counseling on Preventive Health

In addition to discussing the use of OTC drugs, this activity is also complemented by counseling on the importance of a healthy lifestyle as a preventive effort to prevent disease. The service team provided simple tips for maintaining health, such as maintaining cleanliness, eating

nutritious food, getting enough sleep, and exercising regularly. This counseling is expected to reduce dependence on drugs and prioritize prevention efforts early on.

Evaluation and Closing

At the end of the activity, an evaluation was conducted by giving a short quiz to measure the extent to which students understood the material that had been delivered. The quiz included questions about understanding the types of OTC drugs, how to choose the right drugs, as well as knowledge about side effects and contraindications of drugs. The quiz results are used to evaluate the success of the service and see which areas need to be improved in the next activity.

This activity was closed with thanks from the school to the community service team, as well as the hope that the knowledge gained can be applied by students in their daily lives. The community service team also provided materials in the form of brochures containing information on the safe use of OTC drugs, as well as contacts that can be contacted if students need further information about drug use.

Post-activity Evaluation

After the activity was completed, an evaluation was carried out to determine the impact of this service on students' understanding of the use of OTC drugs. The evaluation was carried out by conducting interviews with several students who participated in the activity, as well as collecting feedback from the school to determine the extent to which this program was useful and what needed to be improved in the next service activity. This activity is expected to provide students with a better understanding of the importance of using drugs wisely and responsibly, and increase their awareness of the importance of maintaining health in a more preventive way. This service not only provides information on drug use, but also teaches students to care more about their own health and prevent health problems early on.

RESULTS AND DISCUSSION

The community service activity aimed at educating students on the use of over-the-counter (OTC) medications as a preventive health measure at SMP Muhammadiyah 2 Kediri took place on Friday, September 20, 2024. The event was attended by 20 students, consisting of 4 students from Grade 8, 7 students from Grade 9, and 9 students from Grade 7. The educational session proceeded smoothly, including a question-and-answer session and distribution of educational materials related to the safe use of OTC medications. The outcome of this service activity showed an increase in participants' understanding of OTC medication use and the importance of healthy lifestyles as preventive health measures.

Table 1. Participant Profile of OTC Medication Education Activity

Class	Number of Participants	Percentage of Participants (%)
Grade 7	9	45
Grade 8	4	20
Grade 9	7	35
Total	20	100

Material Delivery and Participant Interaction

The materials presented by the community service team included an introduction to OTC medications, common types of OTC medications available in the market, how to choose the right medication, and the potential risks associated with improper use of OTC drugs. The service team

employed an interactive approach to make the material more accessible to students. Participants were given the opportunity to ask questions about the topics discussed and share their personal experiences with using OTC medications.

In general, the event received positive feedback from participants, evident from their enthusiasm during the question-and-answer and discussion sessions. Several students shared their experiences with using OTC medications for common issues like headaches or mild flu. The service team then provided further explanations on the potential risks of using medications without proper dosages or medical consultation. This discussion aimed to raise awareness that, although OTC medications are easily accessible, their use still requires caution.

Increase in Participant Understanding

To assess the improvement in participants' understanding, a post-activity evaluation was conducted in the form of a short quiz with multiple-choice and short-answer questions related to the material presented. The quiz aimed to evaluate how well the students grasped the topic. Based on the quiz results, most students demonstrated a solid understanding of how to select the right OTC medication, recognize side effects, and read medication labels properly.

Table 2. Evaluation Results on Participants' Understanding of OTC Medication Use

Class	Average Quiz Score	Answer Accuracy Percentage (%)
Grade 7	80	85
Grade 8	85	90
Grade 9	82	88
Total	82.3	87.6

From these results, it can be seen that the average score obtained by participants was 82.3, with an answer accuracy rate of 87.6%. This indicates that the majority of participants understood the material well, particularly regarding how to choose the right OTC medication, the side effects of these drugs, and how to read OTC medication labels. These results demonstrate that the educational activity was effective in improving their understanding of safe and responsible OTC medication use.

Discussion and Reflection on the Activity

From the results of this educational activity, it can be concluded that the community service event had a positive impact on increasing the participants' knowledge about the safe use of OTC medications. The interactive approach used during the session helped students engage more actively with the information presented. Additionally, using visual aids such as real examples of OTC medication packaging helped participants recognize how to read information on labels and select appropriate medications based on their needs.

However, despite the significant increase in understanding, some participants still had concerns about how to use OTC medications correctly. For example, some students asked whether they could take OTC medications regularly or for prolonged periods, which highlighted the need for further education on the duration of OTC medication use and the importance of consulting healthcare professionals if the medication is used for more than a few days.



Figure 1. Discussion process at SMP Muhammadiyah 2 Kediri

The discussion on healthy lifestyle habits as part of disease prevention also received positive responses from participants. They showed a keen interest in this topic, with some students asking about how to maintain better health, such as the importance of eating healthy foods and exercising regularly. This indicates that the students are not only concerned with medications but also understand the importance of overall health maintenance.

CONCLUSION

The community service activity successfully enhanced the participants' knowledge and awareness about the safe and responsible use of OTC medications. Conducted on Friday, September 20, 2024, the activity involved 20 students from Grades 7, 8, and 9. The interactive educational session covered essential topics such as understanding the types of OTC medications, proper selection and usage, potential side effects, and the importance of reading medication labels.

The results showed a significant improvement in the participants' understanding, with an average quiz score of 82.3 and an accuracy rate of 87.6%. Students demonstrated better knowledge about choosing the right medications and recognizing the importance of consulting healthcare professionals when necessary. Additionally, discussions on healthy lifestyle habits as preventive health measures were met with enthusiasm, reflecting the participants' growing interest in maintaining overall health. This activity highlights the importance of early education on medication use as a strategy to prevent misuse and promote health awareness among adolescents. The interactive delivery method, supported by real-life examples and visual aids, was particularly effective in engaging students and enhancing their comprehension.

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commitment to learning about the safe use of over-the-counter medications inspires us to continue promoting health education in the community. Finally, our sincere appreciation goes to all individuals and parties who contributed their time, expertise, and resources to make this program a success. We hope that this collaboration continues to flourish in future initiatives aimed at improving public health awareness.

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