

## Capacity Building of Village Midwives to Improve Knowledge about Self-Medication at Omben Public Health Center, Sampang Regency, East Java Province

Shrimarti Rukmini Devy <sup>1)</sup>, Liza Pristianty<sup>2)</sup>, Toetik Koesbardiati<sup>3)</sup>

<sup>1</sup> Department of Epidemiology, Biostatistics, Population Studies, and Health Promotion, Faculty of Public Health, Universitas Airlangga, Surabaya, Indonesia 60115

<sup>2</sup> Faculty of Pharmacy, Universitas Airlangga, Surabaya, Indonesia, 601115

<sup>3</sup> Department of Anthropology, Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya, Indonesia, 601115

✉Email: [shrimarti-r-d@fkm.unair](mailto:shrimarti-r-d@fkm.unair)

### ABSTRACT

**Background:** Pregnancy is a physiological phase that needs to be prepared as well as possible. Sometimes when feeling complaints or symptoms of illness, pregnant women decide to take medication. However, most pregnant women do not know the safe use of drugs during pregnancy. This can certainly affect the health of the mother and the fetus in her womb. Therefore, it is necessary to provide information about self-medication so that pregnant women have sufficient knowledge of the right and safe drug consumption patterns. Based on these problems, this community empowerment program (PKM) is carried out to increase the capacity of village midwives. For this purpose, the study employed a quasi-experimental method. A total of 25 village midwives participated in the research. The program that will be carried out includes providing self-medication materials and communication methods, and training on how to make an RTL (follow-up action plan). After that, village midwives were taught to apply the snakes and ladders media as a means of delivering educational materials to pregnant women. **The results** of the activity show that there was an increase in the knowledge of village midwives after participating in the community empowerment program, leading to the conclusion that this snakes and ladders media can make it easier for pregnant women to understand the right self-medication during pregnancy so that pregnant women have additional knowledge and benefits in managing themselves regarding the right drug consumption.

**Keywords:** Omben East Java, Pregnant women, Quasi-experimental, Self-medication, Village midwife.

### INTRODUCTION

Pregnancy, childbirth, and breastfeeding are physiological processes for women that need to be prepared and maintained as well as possible. When pregnant, the health of the mother and fetus is an important requirement for the development of both parts of the unit (Nasriyah and Ediyono, 2023). Even during the pregnancy and up to breastfeeding phase, a mother can experience complaints or disorders in her health. This causes the mother to have to take certain drugs or supplements to overcome these complaints. However, not all drugs consumed are safe for the mother and the baby she is carrying. Drugs can also cause unwanted effects on the fetus during pregnancy (Mangun, 2024).

Drugs consumed by pregnant women need special attention, because the

effects of the drug can affect the fetus. When in the placenta, drugs undergo a biotransformation process, where drugs can be beneficial and can also be detrimental. This biotransformation process can then form reactive compounds that are teratogenic/dysmorphogenic which can damage the fetus during growth (Ministry of Health of the Republic of Indonesia, 2006).

Some drugs can pose a risk to the health of the mother and the fetus she is carrying. The use of drugs in pregnant women in the first trimester is known to be riskier and can cause birth defects (teratogenic). This is because the first trimester is the development stage of the entire main body (except the central nervous system, eyes, teeth, external genitalia and ears) (Masikki and Fadhli, 2022). Therefore, exposure to drugs can permanently disrupt the formation of

these organs. The greatest risk at this stage is pregnancy aged 3-8 weeks. Meanwhile, in the second and third trimesters of pregnancy, drugs can affect the growth and functional development of the fetus or have toxic effects on fetal tissue. The effects of drugs given before birth can cause side effects at birth or in neonates after birth (Prest and Tan, 2003). According to (Ratri *et al.*, 2015), mothers' knowledge regarding the use of drugs during pregnancy is still very lacking. So it is necessary to provide education to increase the knowledge of pregnant women. Self-medication (swamedication) is the most common effort made by the community to treat complaints or symptoms of illness before they decide to seek help from a health service center (Lutfitasari *et al.*, 2021). Self-medication is an alternative for the community to increase the affordability of treatment. Self-medication is often done by the community when experiencing complaints or symptoms of minor illnesses such as fever, pain, dizziness, cough, influenza, stomach ulcers, worms, diarrhea, skin diseases, and others. The selection of the type of drug needs to pay attention to the symptoms or complaints of the disease and special conditions such as pregnancy, breastfeeding and others (Ifianti, 2022).

Knowledge about the use of over-the-counter drugs is very important for pregnant women. Choosing the wrong drug will have fatal consequences and can endanger the mother and her fetus (Nurlaila Hidayati, 2022). Therefore, it is necessary to increase the knowledge of pregnant women on how to choose good and correct drugs, one of which is by involving village midwives.

The role of village midwives is very important in efforts to increase the knowledge of pregnant women regarding self-medication. Village midwives are considered capable of conveying important information about how to use over-the-counter drugs safely for pregnant women because they have the knowledge to provide counseling to pregnant women properly (Muzdalia *et al.*, 2022). For this reason, it is necessary to strengthen the abilities of village midwives by holding counseling and training.

Sampang Regency, located on Madura Island, especially Omben District, is an important point for this training and counseling activity. It is known that the

lack of knowledge of pregnant women in the Omben area is still quite high (Masroah, Hidamansyah and Jayanti, 2024). For this reason, the Omben Health Center, Sampang Regency is the target of this program, because in this area there is still a need to provide information to pregnant women so that their knowledge about self-medication increases. For this reason, this program and research aims to provide a solution by increasing the knowledge and skills of village midwives in terms of self-medication in the Omben District Health Center area. It is hoped that with this program, village midwives will find it easier to communicate with pregnant women in their area. When village midwives are able to communicate well, knowledge about self-medication can be conveyed clearly so that pregnant women can know the procedures for safe drug consumption during pregnancy.

## METHODS

The method used is quasi-experimental. The implementation of this activity is a collaboration between teams of lecturers from the Faculty of Public Health, the Faculty of Pharmacy, and the Faculty of Social and Political Sciences at Airlangga University. This activity was conducted over a period of three months, from July to September 2019. The subjects in this activity are 25 village midwives in Omben Sampang. Before the training, the village midwives were asked to fill out a questionnaire first (pre-test) to measure their initial knowledge of self-medication, then after the training and education about communication and self-medication using snakes and ladders as a media, they were given the same questionnaire as the pre-test and (post-test) in order to evaluate their knowledge and to spot if there was an improvement after the treatment. Additionally, the participants were also asked to develop a follow-up action plan (RTL) after completing training. The stages of community service activities consist of:

1. Planning the implementation of community service.
2. Coordination with the Omben Health Center Management.
3. Preparing for the implementation of capacity building for Village Midwives.
4. Conducting a pre-test before capacity building.

5. Implementing of capacity building for village midwives.
6. Conducting the “snakes and ladders” self-medication game as an educational media.
7. Evaluating capacity building activities through a post-test.
8. Developing a follow-up action plan (RTL) by participants.

The purpose of this activity is to equip village midwives with adequate knowledge about the concepts, benefits, risks, and limitations of self-medication, enabling them to serve as reliable sources of information for the community and prevent the misuse or overuse of medication that could harm health. Another goal is to train village midwives to communicate health information on self-medication effectively and clearly, tailored to the needs of pregnant women, breastfeeding mothers, and families.

The capacity building activities were conducted using the lecture method delivered by the community service team. The materials presented included communication procedures, materials on self-medication, and explanations about the snakes and ladders game material. Communication procedures need to be understood by village midwives effectively in order to convey health messages to the community. Afterward, the self-medication material was explained in detail. The community, especially pregnant women, needs to understand how to perform safe and effective self-medication during their pregnancy. To make the information on self-medication easier to understand, it was delivered through an interactive medium, namely the snakes and ladders game.

## RESULTS AND DISCUSSION

Self-medication is a self-medication effort, usually done to overcome complaints and minor illnesses that are widely experienced by the community, such as fever, pain, dizziness, cough, influenza, stomach ulcers, worms, diarrhea, skin diseases and others. Self-medication is an alternative taken by the community to increase the accessibility of community treatment, requiring integrated guidelines so that medication errors do not occur. Pharmacists as one of the health professions should act as

information providers (drug informers), especially for drugs used in self-medication. Drugs that are included in the over-the-counter and limited over-the-counter drug groups are relatively safe to use for self-medication (self-medication) (Agustina, Nosa and Fauziah, 2023). It is known that the Village Midwife Capacity Building activity related to self-medication at the Omben Health Center, Sampang Regency, East Java Province was attended by 25 village midwives and coordinating midwives at the Health Center. The midwives received training on self-medication, especially for pregnant women using the snakes and ladders media which can be applied and applied to pregnant women in their respective areas. Through this, the activity is emphasized to provide an understanding to midwives that the snakes and ladders media will make it easier for health workers, especially midwives, to provide education about self-medication to the community.

The Village Capacity Building Activity to Increase Knowledge about Self-medication is divided into two activities. The first is self-medication training for village midwives in the Omben Health Center area. All village midwives who participated in this activity numbered 25 people and all respondents were female. Second, the activity carried out was the Village Midwife Practice in using the snakes and ladders media to increase knowledge about self-medication, which was attended by village midwives, cadres, and representatives of pregnant women.

## Pre-Test and Post-Test Results

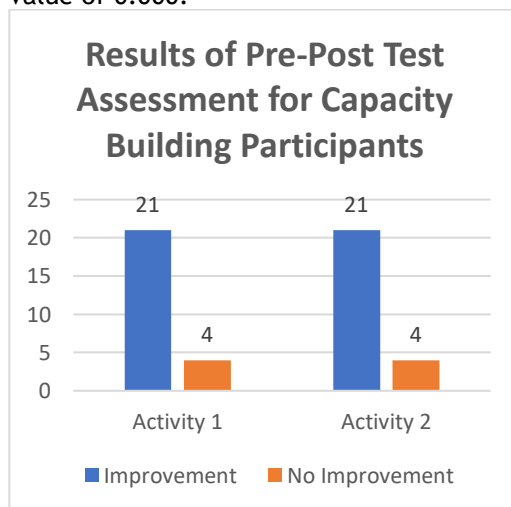
The pre-test and post-test activities were carried out using a questionnaire with several lists of questions given to respondents. Based on the results of the pre-test and post-test, it was known that there was an increase in midwives' knowledge about self-medication in conditions before and after training. Based on the records, it is known that 95% of participants stated that the training provided ease in the explanation process related to self-medication. In addition, the activities were arranged in a very engaging and interactive manner, designed like a game. This unique approach included elements such as challenges, teamwork, and rewards, making the activities both fun and educational. Participants were actively involved, which helped maintain

their interest and enthusiasm throughout. The game-like structure not only encouraged competition but also fostered cooperation among participants, ensuring the activities were dynamic and far from boring. These features made the experience enjoyable and memorable for everyone involved.



Picture 1. Practice with game snakes and ladders.

Based on the results of the pre-test and post-test of 25 midwives, it can be seen the graph 1 that there was an increase in the average score, both in activity one (1) and activity 2 (2). In supporting participants, outside the village midwife, it was also found that there was an increase in the average post-test score compared to the pre-test score in activity one (1) and activity two (2). There was an improvement in the average results of the pre and post-tests. The pre-test score was 79.2, and the post-test score was 94. After calculations and analysis, it was found that there was a significant difference between the pre-test and post-test scores with a p-value of 0.000.



Graph. 1 Result of Pre and Post-Test

### Knowledge Improvement Activities about Self-medication using Snakes and Ladders and Follow-up Plans (RTL)

The activity began with the provision of material related to self-medication delivered orally, then continued with practice using snakes and ladders media. This activity also divided participants into three groups for the application of using snakes and ladders media accompanied by tutors in each group. After the groups were formed, participants prepared each snakes and ladders media package and discussed the jargon of each group. Next, participants in each group practiced using the snakes and ladders media based on the guidebook and mentoring and tutoring. After practicing using the snakes and ladders media, they were also given material on compiling a follow-up action plan (RTL) which is expected to be carried out by midwives in each region. RTL written and agreed upon by the participants includes the use of snakes and ladders media to increase community knowledge regarding self-medication. In addition, the village midwives are also committed to being tutors in the use of the media. Then, in addition to the two previous things, the village midwives were also committed to advocating to the village head with the aim of getting support in implementing increased knowledge about self-medication and being able to explain to village officials that self-medication is not intended to "kill" stalls that sell medicine, but to provide additional education related to the world of health.

Monitoring the commitment of village midwives is conducted through observation, evaluation of activity implementation, as well as feedback from participants. Reflective discussions with midwives are also used to identify challenges and provide solutions to ensure the program's sustainability.

### Discussion

Capacity-building activities aim to enhance the knowledge and skills of individuals or groups relevant to their roles and responsibilities. In this context, capacity-building programs for village midwives on self-medication have proven effective in improving their knowledge, particularly in educating communities about the safe and responsible use of



medications. This aligns with previous research emphasizing the importance of training or capacity-building for healthcare workers to enhance their ability to deliver quality healthcare services (Majamanda *et al.*, 2022). In this regard, capacity-building efforts focus not only on technical aspects but also on empowering healthcare workers to serve as reliable sources of information for the community.

Other studies have also highlighted that training-based approaches can significantly improve the knowledge and skills of healthcare workers in delivering quality services, which is particularly relevant in the context of self-medication (Ruhmel *et al.*, 2022). Meanwhile, research conducted by (Hikmah *et al.*, 2023) revealed that education delivered through interactive methods, such as games, significantly improved participants' understanding. Interactive media has proven effective in capturing participants' attention and facilitating the delivery of critical health information, such as the proper use of medications. The study reported that game-based learning methods enhanced participant engagement and motivation, ultimately helping them better understand and retain the information provided (Hikmah *et al.*, 2023).

This increase in knowledge is crucial, given that self-medication is a common means for communities to independently access healthcare. However, without adequate knowledge, self-medication poses risks, including irrational drug use that may harm health. For instance, improper medication dosages or indications can exacerbate health conditions or lead to dangerous side effects. Research conducted by (Rudini *et al.*, 2024) found that training on self-medication improved community understanding and independence in practicing self-medication safely and appropriately. This research supports our findings, showing that, with increased knowledge, village midwives are better equipped to provide accurate information to the community, particularly to pregnant women, who often require specific guidance on medication use.

## CONCLUSIONS

Through the results of the research conducted, it can be concluded that, first,

the training participants consisted of village midwives, cadres, and pregnant women. All village midwives became tutors and used the snakes and ladders media to improve community knowledge about self-medication. Second, the results of the pre-post test showed that participants' knowledge regarding self-medication had increased. Third, the commitment of participants in improving knowledge about self-medication using the snakes and ladders media can be seen from the follow-up action plan (RTL) which was prepared while simultaneously providing counseling to residents regarding self-medication using the snakes and ladders media aid.

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