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The level of public knowledge on the use of mefenamic acid painkillers

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ABSTRACT

Introduction: Mefenamic acid is a non-steroidal anti-inflammatory drug (NSAID) with analgesic, anti-inflammatory, and antipyretic effects. This medication is used for mild to moderate pain, including headaches, toothaches, postoperative and postpartum pain, dysmenorrhea, and osteoarthritis. This study aims to provide an overview of public knowledge about mefenamic acid pain relievers.

Method: This study uses quantitative descriptive research, which conducts direct research on respondents (the community) who are taken as research subjects. This study describes the level of public knowledge about mefenamic acid anti-pain.

Results: The most users of mefenamic acid are women, which is 49 people (62.12%), with the most vulnerable age, namely 17-25 years old, as many as 26 people (35.62%), with the most work, which is not working as many as 37 people (50.68%), with the last education of each respondent in high school, which is 35 people (47.95%). Patient knowledge about the use of mefenamic acid reached 75.02%, which was obtained from the processing of data from community research on mefenamic acid, including quite good knowledge.

Conclusion: Mefenamic acid is more commonly found in women, especially in young age groups. Most users are unemployed and have a high school-level education background. The level of public knowledge about the use of mefenamic acid is quite good, but further educational efforts are still needed to increase a more comprehensive understanding of the use of the drug. It is recommended that regular counseling be carried out on the appropriate and rational use of drugs, especially for young age groups and people who do not have a background in health education.

Keywords: Knowledge, Mefenamic Acid, Pain.

INTRODUCTION

Health is one of the important aspects of human life that supports the achievement of an optimal quality of life. In maintaining and maintaining health, the use of drugs is inseparable. One type of drug that is often used by the public is pain relievers or analgesics (Salahshoori *et al.*, 2023). This drug is used to treat various types of pain, ranging from headaches and muscle pain to menstrual pain. Among the different types of analgesics circulating in society, mefenamic acid is one of the most widely used, especially by women of productive age. Mefenamic acid is a non-steroidal anti-inflammatory drug (NSAID) that works by inhibiting the enzyme cyclooxygenase (COX) thereby reducing the production of prostaglandins, compounds that play a role in inflammatory and pain processes (Hawash *et al.*, 2023). These medications are often prescribed to treat mild to moderate pain, including menstrual pain (dysmenorrhea), muscle aches, headaches, and postoperative pain. Although it is classified as a hard drug that should be used with a doctor's prescription, the truth is that mefenamic acid is quite easy to obtain by the public through pharmacies and drug stores, both with and without a prescription (Wardoyo and Oktarlina, 2019).

The ease of access to this drug, coupled with the lack of supervision and education, raises various problems related to the use of mefenamic acid. Not a few people take this drug without sufficient knowledge about the indications, dosage, duration of use, and side effects that can be caused (Unnikrishan *et al.*, 2024). This can increase the risk of side effects, such as gastrointestinal disorders, allergic reactions, and even impaired kidney and liver function if used long-term or not according to the rules. Public knowledge about drug use is very decisive in preventing the risk of irrational drug use (Abdi and Nasiri, 2025). Rational use of drugs is the use of correctly indicated drugs, the right dosage, the right patient, and the right way and duration of administration. Public ignorance of basic information related to mefenamic acid can lead to drug abuse, including overconsumption, use for improper indications, and harmful drug interactions (Ahammer and Packham, 2023). Therefore, the level of public knowledge about the use of mefenamic acid is an important indicator in assessing the extent of public understanding and behavior in using drugs wisely.

Factors such as age, education level, occupation, and gender influence the level of public knowledge about drugs. Young age groups and those with higher education tend to have better access to information and, thus, a better understanding of the correct use of medications. However, not all information obtained by the public, especially from the internet or social media, is valid or scientific, so education from health workers is still needed to avoid misunderstandings (Guettai *et al.*, 2024). In addition, the culture of taking drugs in Indonesia, which still tends to be oriented towards 'quick results' without considering long-term safety aspects, is also a challenge in itself (Salahshoori *et al.*, 2024). Many people immediately buy and take pain relievers when they feel uncomfortable without first consulting medical personnel. This is further exacerbated by the assumption that pain medications such as mefenamic acid are 'safe' because they have been widely used, even though each drug has a risk of side effects and certain drug interactions (S, B and Murali, 2024).

This condition emphasizes the importance of education and increasing public awareness about the use of drugs, especially mefenamic acid. Preventive efforts such as health counseling, distribution of drug information leaflets, and free pharmacy consultations can be effective strategies to increase public knowledge. Through related

agencies, the government is also expected to be more active in supervising the circulation of hard drugs and ensuring that the public has access to correct and easy-to-understand information. It is important to study the level of public knowledge about the use of mefenamic acid to map the extent to which the public understands the benefits, risks, and how to use this drug. The information obtained from this study can be used as a basis for planning a more targeted health education program, especially for groups with low levels of knowledge or high risk of drug abuse (Rapp-Wright *et al.*, 2023).

By looking at the phenomenon of the widespread use of mefenamic acid in the community and the potential for its abuse due to lack of information, it is necessary to conduct further studies to find out the extent of public knowledge about this drug. This study is also expected to provide recommendations for health practitioners, policymakers, and the general public to improve the understanding and use of safer and more responsible medicines. Based on this description, this study aims to determine the level of public knowledge about using mefenamic acid pain relievers and identify factors that affect this knowledge. It is hoped that the results of this study can provide a clear picture of the conditions that occur in the field and become the basis for the preparation of more effective and educational health policies.

METHODOLOGY

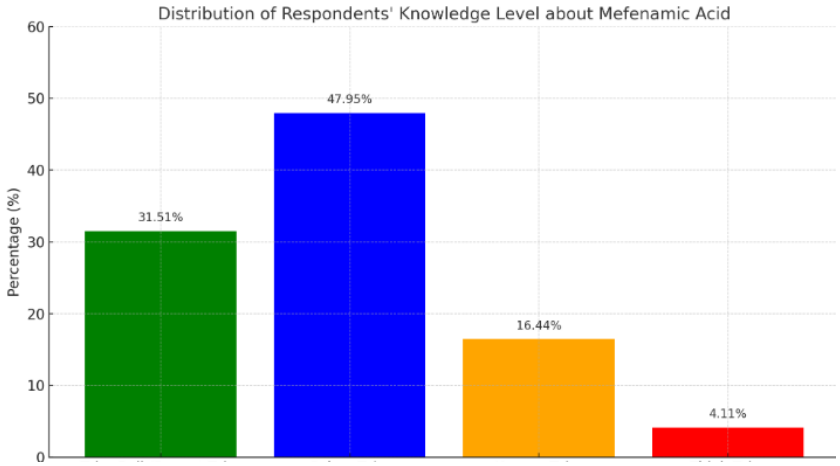
The type of research used in this study is quantitative descriptive research, which conducts direct research on respondents (the community) who are taken as research subjects. This study describes the level of public knowledge about mefenamic acid anti-pain. This research will be carried out in April - May 2025. The population in this study is all residents of Jalan who are 17-60 years old and have consumed the painkiller mefenamic acid, with a total of 270 people. In this study, the sample was 73 people. Sampling was done using the Slovin formula to determine the number of samples, and the survey used the Likert scale.

Nonprobability Sampling is a technique for determining samples based on chance; that is, anyone who happens to meet a researcher can be used as a sample if it is seen that the person who happens to be met is suitable as a data source. Inclusion Criteria. Have taken Mefenamic Acid without a doctor's prescription. People aged 17 - 60 years. People who can read and write. Can communicate well. Physically and spiritually healthy. Be willing to be a respondent. Exclusion criteria. People under 17 years old. Often, buy mefenamic acid with a doctor's prescription. People who have never taken the drug mefenamic acid. Unable to communicate.

In this study, data was obtained from data collection using research instrument data in the form of a questionnaire to measure the level of public knowledge consisting of 15 statements. The technique used in data management is based on data obtained from the respondents' results, namely combining the results of the answers and questionnaires and then presented. Questionnaires were used to measure knowledge using the Likert scale.

RESULT

Chart 1. Community Knowledge Level



Fair Knowledge has the highest percentage at 47.95%, indicating that nearly half of the respondents possess a moderate level of understanding about the proper use, benefits, and risks of mefenamic acid. This suggests that public awareness exists but may not yet be comprehensive. Good/Very Good Knowledge follows at 31.51%, showing that about a third of respondents are well-informed and likely to understand appropriate dosage, indications, side effects, and precautions. Poor Knowledge accounts for 16.44% of respondents. These individuals may have heard of the drug but have limited knowledge about its safe and effective use. No Knowledge represents the smallest group at 4.11%, indicating that only a few respondents are unfamiliar with the drug. Overall, the chart suggests that while a substantial portion of the population has fair to good knowledge about mefenamic acid, there is still a notable percentage (over 20%) of respondents with limited or no understanding. This highlights the need for enhanced educational efforts and community outreach to ensure the rational and safe use of over-the-counter medications like mefenamic acid.

Table 1. Reflecting on the respondents' knowledge levels about mefenamic acid

Knowledge Category	Number of Respondents	Percentage (%)
Good/Very Good Knowledge	23	31.51%
Fair Knowledge	35	47.95%
Poor Knowledge	12	16.44%
No Knowledge	3	4.11%

Based on the survey results, most respondents had varying levels of knowledge about the topic being studied. A total of 23 respondents, or 31.51%, were included in the Good/Excellent Knowledge category, indicating that almost a third of respondents had sufficient or very good understanding. Furthermore, the majority of respondents, namely 35 people or 47.95%, are classified as Sufficient Knowledge. This signifies that almost half of the respondents have moderate or moderate knowledge at an acceptable level, yet there is still room for improvement. Meanwhile, 12 respondents, or 16.44%, were included in the Lack of Knowledge category, which indicates that a small number of respondents have limited or inadequate understanding of the material being studied. Finally, as many as 3 respondents, or 4.11%, had no knowledge about the topic, which shows that many respondents do not know or understand related matters. Overall, this

data shows that while most respondents have a level of knowledge from adequate to excellent, a small percentage of respondents still need additional education or information to improve their understanding. The respondents' knowledge level on the topic studied varied, with most being good to moderate. Although almost half of the respondents have sufficient knowledge and about a third have good to very good knowledge, a small number of respondents still have little or no knowledge. This indicates the need to provide additional education or information so that the understanding of all respondents can be improved equally.

DISCUSSION

The results of this study reveal that the level of knowledge among respondents regarding the topic studied exhibits considerable variation, with the majority falling within the categories of good to moderate knowledge. Specifically, 31.51% of respondents demonstrated good to excellent knowledge, indicating that nearly one-third of the participants have a sufficient or very good understanding of the subject matter. Meanwhile, the largest portion, 47.95%, fell into the sufficient knowledge category, suggesting that almost half of the respondents possess a moderately acceptable level of understanding but leave room for improvement. Conversely, a smaller proportion of respondents showed limited understanding, with 16.44% categorized as having poor knowledge and 4.11% having no knowledge. These findings provide important insights into the general awareness and understanding of the topic among the surveyed population and highlight areas for targeted educational interventions.

The relatively high percentage of respondents with sufficient and good knowledge can positively indicate the existing awareness and education levels regarding the topic. This could be attributed to various factors, including prior exposure to relevant information, educational background, and personal experiences related to the topic (Wada and Olawade, 2025). Respondents in the good/excellent knowledge category likely have had better access to accurate and comprehensive information, which equips them with the ability to understand and apply knowledge effectively (Makvandi *et al.*, 2025). This is crucial because higher knowledge levels often correlate with better decision-making and healthier behavioural practices related to the subject (Itoh *et al.*, 2023).

However, nearly half of the respondents fall under the “sufficient knowledge” category, which also implies that their understanding is moderate and may lack depth or critical details (Jasim *et al.*, 2024). While moderate knowledge is preferable to low or no knowledge, it still signifies that there is considerable potential to enhance their comprehension. This middle-ground group may benefit the most from targeted educational programs to deepen their knowledge and address misconceptions or gaps in understanding (Moragues *et al.*, 2025). For instance, educational campaigns, workshops, or informational materials that focus on elaborating key concepts and practical applications could effectively raise their knowledge from moderate to good or excellent (Herrera-Muñoz *et al.*, 2024). More concerning is the presence of respondents with poor or no knowledge about the topic, which collectively accounts for about 20.5% of the sample. This segment represents a significant minority that may be at risk of making uninformed decisions or engaging in behaviours that could be detrimental due to their lack of awareness (Nandan *et al.*, 2024). Their limited understanding might stem from several factors, including inadequate access to educational resources, socio-economic constraints, lack of interest or motivation, or ineffective communication strategies

educators or healthcare providers use. Identifying and understanding the barriers this group faces is essential for designing effective interventions (Li *et al.*, 2025).

The disparity in knowledge levels among respondents underscores the importance of tailoring educational efforts to meet diverse needs. One-size-fits-all approaches may not be adequate, as the knowledge gap suggests differing baseline levels of awareness and learning preferences (Arumugam *et al.*, 2025). Customized strategies that consider demographic factors such as age, gender, educational background, and occupation could help ensure that educational messages are relevant and engaging to various subgroups. For example, younger respondents or those still in school may respond well to digital learning tools and social media campaigns (Zou *et al.*, 2024). In contrast, older or non-working groups might benefit from community-based outreach programs or printed educational materials.

Furthermore, the study highlights continuous education and information dissemination's critical role in maintaining and improving knowledge levels. Knowledge is not static; it requires ongoing reinforcement and updating, especially in fields where new research and guidelines frequently emerge (Abdolmohammad-Zadeh and Alipour, 2023). Establishing sustained educational programs and collaborations with schools, community organizations, and healthcare institutions can create an environment conducive to lifelong learning and empowerment. These programs should also foster critical thinking and self-efficacy, enabling individuals to seek, evaluate, and apply information independently (Unnikrishnan *et al.*, 2024). Another important consideration is the influence of knowledge on attitudes and behaviours. While this study focuses on knowledge levels, it is well documented in the literature that knowledge alone may not be sufficient to change behaviours or improve outcomes. Attitudes, beliefs, cultural norms, and accessibility of resources all interact with knowledge to shape how individuals act (Kee *et al.*, 2024). Therefore, future research could explore how knowledge translates into behavior in this population and what additional factors mediate this relationship. Understanding these dynamics would allow for more holistic and effective interventions that inform and motivate positive change. In addition, the presence of respondents with no knowledge at all signals a gap in outreach and inclusivity. These individuals might be marginalized or disconnected from conventional channels of information. Strategies to improve knowledge must consider these hard-to-reach groups, ensuring that no population segment is left behind. Collaborations with community leaders, using vernacular languages and culturally sensitive messaging, can enhance these groups' reach and acceptance of educational efforts.

The findings also carry implications for policymakers and practitioners. Effective policy should prioritize resource allocation towards education and awareness campaigns targeting areas or groups with identified knowledge deficits. Moreover, healthcare professionals and educators should be trained to communicate information clearly and empathetically, considering their audiences' diverse literacy levels and backgrounds. Incorporating feedback mechanisms can help continually assess the effectiveness of these interventions and adapt them as needed. The study demonstrates that while most respondents possess adequate to excellent knowledge about the studied topic, there remains a significant minority with insufficient or no knowledge, highlighting the need for comprehensive, targeted, and sustained educational interventions. Addressing these knowledge gaps through tailored strategies and inclusive approaches can improve overall awareness, promote informed decision-making, and ultimately enhance outcomes related to the topic of interest. Future studies should build on these findings by examining the

relationship between knowledge, attitudes, and behaviours and identifying the most effective methods for disseminating knowledge within this population.

CONCLUSION

The survey results indicate that respondents' knowledge about the studied topic varies, with most having moderate to good understanding. Nearly one-third of respondents demonstrate good to excellent knowledge, while almost half possess sufficient knowledge. However, a notable minority have poor or no knowledge, highlighting gaps that must be addressed. These findings emphasize the importance of implementing targeted educational programs to enhance understanding and ensure that all respondents receive adequate information. Improving knowledge across all groups can lead to better awareness, informed decision-making, and more positive outcomes related to the topic studied.

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Conflict of Interest

There are no potential conflicts of interest relevant to this article.

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