PROCEEDING
ICOSSTH 2025
International Conference on Social, Science, Technology and Health

Scope:
Social
Science
Technology
Health

ISSN: 68XX-XX09

Website
https://journal.icossth-politeknikmfh.id/

TINGKAT PENGETAHUAN SWAMEDIKASI TERHADAP DISMINOREA PRIMER PADA MAHASISWI KESEHATAN DI KOTA MATARAM

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ABSTRACT

Primary dysmenorrhea is not a disease but it is necessary to know how to treat it in order to treat yourself (self-medication). The implementation of self-medication is predicted to cause many medication errors due to limited public knowledge of drugs and their use. The purpose of this study was to determine the category of self-medication knowledge for primary dysmenorrhea among health students in Mataram City. This study is a descriptive study with a cross-sectional approach. Researchers in this study treated the subjects by giving them a questionnaire. This study is a qualitative study using a Non-Probability Sampling sampling method with Consecutive sampling, namely finding samples that meet the inclusion criteria, until the required number of samples is met, namely 206 samples. The results of the study are, respondents with a high level of knowledge are 150 respondents (72.8%), those with a moderate level of knowledge are 47 respondents (22.8%), and those with a low level of knowledge are 9 respondents (4.4%). The conclusion is that the level of self-medication knowledge regarding primary dysmenorrhea among female health students in Mataram City is classified as high. The author suggests that future researchers conduct research on the effect of respondents' level of medication knowledge on primary dysmenorrhea.

KEYWORDS : Swamedication Knowledge, Primary Dysmenorrhea, Students Health

INTRODUCTION

The prevalence of menstrual pain worldwide is considerably high, with more than 50% of women in each country experiencing dysmenorrhea, ranging from 15.8% to 89.5%. In the United States, it is estimated that nearly 90% of women suffer from menstrual pain, of which 10–15% experience severe pain that significantly interferes with daily activities (Calis, 2011). In Indonesia, menstrual pain is predominantly experienced by young women, with the highest prevalence observed among university students: 34.2% with severe pain, 36.6% with moderate pain, and 29.2% with mild pain (Kural et al., 2015). This decline in quality of life is also evident among working women, as severe menstrual pain often disrupts work activities, preventing them from performing their tasks optimally. Such problems frequently remain undiagnosed and untreated. Considering the

high prevalence of dysmenorrhea in Indonesia particularly its negative impact on students' concentration during learning activities awareness of its management must be introduced early among Indonesian women. Menstrual pain varies in severity, ranging from mild and barely noticeable to severe, with some women fainting or requiring medical attention due to its interference with daily activities (Asrinah, 2011).

In Indonesia, many women experiencing dysmenorrhea neither report their condition nor seek medical assistance. Feelings of embarrassment and a tendency to underestimate the problem often obscure the actual number of sufferers. It is estimated that up to 90% of women have experienced dysmenorrhea (Anurogo & Wulandari, 2011). A previous study by Releghea (2012) reported that among 133 respondents, 44% had sufficient knowledge of dysmenorrhea, while 45.1% exhibited inappropriate behavior in managing it. Primary dysmenorrhea typically occurs in adolescents, most commonly between the ages of 10 and 20. Although primary dysmenorrhea is not classified as a disease, it is important to understand appropriate management strategies to facilitate self-medication. A study conducted by Waji (2020) found that respondents' knowledge of self-medication for primary dysmenorrhea was high in 84.37% of cases, moderate in 14.58%, and low in 1.04%.

Self-medication, however, carries the risk of medication errors, often caused by limited public knowledge about drugs and their appropriate use (Ministry of Health, 2011). The legal basis for self-medication in Indonesia is stipulated in the Minister of Health Regulation No. 919/Menkes/Per/X/1993. According to Pratiwi et al. (2014), self-medication is a common practice whereby individuals treat symptoms or illnesses without prior consultation with a physician. Typically, self-medication addresses common health problems such as fever, pain, cough, influenza, headache, gastritis, helminthiasis, diarrhea, skin diseases, and others (Ministry of Health, 2013). The 2014 National Socio-Economic Survey (Susenas) revealed that 61.05% of Indonesians engaged in self-medication for health complaints (BPS, 2016). The main reasons cited include the perception that the illness is minor (46%), lower cost of drugs (16%), and easy accessibility of medicines (9%) (Kertajaya et al., 2011).

Based on these considerations, this study was conducted to assess the level of self-medication knowledge related to primary dysmenorrhea among female health students in Mataram City.

LITERATURE REVIEW

Dysmenorrhea, also referred to as menstrual cramps or painful menstruation, is commonly described in English as "painful periods" (American College of Obstetricians and Gynecologists, 2015). Menstrual pain is typically characterized by cramping localized in the lower abdomen, with severity ranging from mild to severe. The intensity of dysmenorrhea is directly associated with the duration and volume of menstrual bleeding. Menstruation is almost always accompanied by discomfort and pain (Sarwono, 2011). These cramps originate from intense uterine contractions aimed at expelling menstrual blood. Such contractions lead to muscular tension, resulting in

cramps or pain, not only in the abdominal region but also in the supporting muscles of the lower back, hips, pelvis, thighs, and calves (Sinaga, 2017).

The term “dysmenorrhea” is generally applied to menstrual pain of sufficient severity that it compels individuals to rest and suspend daily activities for several hours or days. Severe dysmenorrhea is often accompanied by nausea, vomiting, diarrhea, dizziness, headaches, and, in some cases, fainting. When symptoms reach this level of intensity, medical evaluation is essential and should not be ignored (Anurogo & Wulandari, 2011).

In general, menstrual pain arises from dysrhythmic contractions of the myometrium, manifesting in one or more symptoms, from mild to severe pain in the lower abdomen, buttocks, and medial thighs. Recent molecular biology research has identified susceptibility genes, such as the CYP1A1 Mspl and Hincll genotypes, which modulate the association between passive smoking and menstrual pain (Anurogo & Wulandari, 2011).

Primary dysmenorrhea typically occurs in adolescents and young women, presenting as cramping pain localized in the central lower abdomen. It is frequently accompanied by nausea, vomiting, diarrhea, and headaches, with no abnormalities detected upon gynecological examination. The pain usually begins before menstruation, peaking on the first and second days (Anwar, Baziad, & Prabowo, 2011). Secondary dysmenorrhea, by contrast, is more common in older women and usually develops two or more years after the establishment of regular menstrual cycles. Pain begins with menstruation and increases concurrently with menstrual bleeding, often associated with gynecological abnormalities, and frequently requiring surgical intervention (Anurogo & Wulandari, 2011).

To measure pain intensity in this study, the **Numerical Rating Scale (NRS)** was employed, ranging from 0 to 10, with the following descriptors:

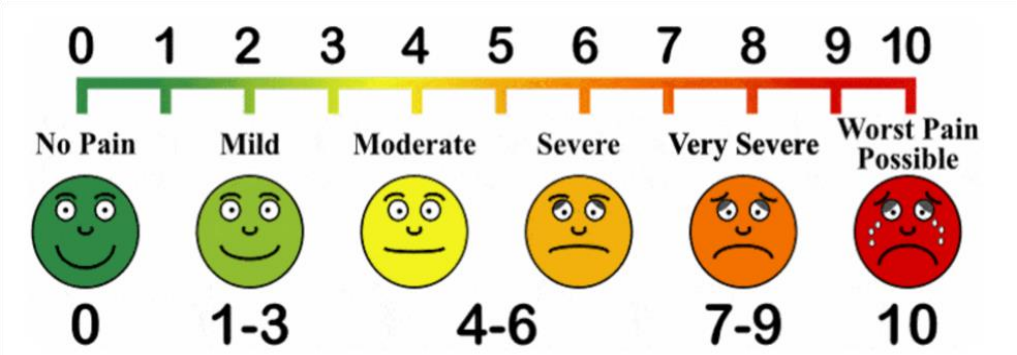

Figure 1. Numerical Rating Scale (NRS)

information:

0 = No pain, with no interference in daily activities.

1–3 = Mild pain (abdominal cramps that are tolerable, allowing normal activities and concentration).

4–6 = Moderate pain (cramps spreading to the back, decreased appetite, disrupted activities, and difficulty concentrating).

7–9 = Severe pain (cramps radiating to the waist, thighs, and pelvis; accompanied by weakness, nausea, and inability to concentrate or perform activities).

10 = Very severe pain (cramps radiating to the waist, thighs, legs, and back; accompanied by nausea, vomiting, headache, extreme weakness, inability to get out of bed, and sometimes fainting).

Self-medication constitutes an important strategy in community health care. However, improper practice of self-medication may lead to **drug-related problems (DRPs)** due to insufficient knowledge about medicines and their correct use (Aini, 2017). Self-medication represents a common health-seeking behavior, but it requires professional supervision, ideally by pharmacists or pharmacy technicians, to ensure safety and rationality (Ajeng et al., 2013).

Rational self-medication should involve prior consultation with health professionals such as physicians or pharmacists, or at least careful review of available drug information sources, including package leaflets and brochures. Pharmacists play a critical role, especially when dealing with prescription-only medicines dispensed under the “Obat Wajib Apotek” (mandatory pharmacy drug) category (Ministry of Health, 2013).

Several factors influence the practice of self-medication, which are essential to consider when evaluating health policy and patient care. According to Djunrako (2011), these include economic status, increased health awareness, promotion of over-the-counter (OTC) and limited-use drugs, widespread drug distribution, and self-medication campaigns. In West Nusa Tenggara (NTB), self-medication remains common for improving health, treating minor illnesses, and managing chronic conditions post-physician consultation.

The **World Health Organization (WHO)** identifies several contributing factors to the increasing prevalence of self-medication:

1. **Socioeconomic factors**: Higher levels of education and easier access to health information increase public interest in health and encourage individuals to participate actively in health-related decision-making.
2. **Lifestyle factors**: Greater awareness of lifestyle impacts on health motivates individuals to maintain wellness proactively rather than only seeking treatment when ill.
3. **Drug accessibility**: Convenience in obtaining medicines outside clinical settings encourages more individuals to self-medicate rather than waiting in hospitals or clinics.

4. **Environmental health**: Improved sanitation, nutrition, and living conditions enhance the capacity for disease prevention, thereby reinforcing self-care behaviors.
5. **Product availability**: The continuous introduction of safe and reliable new drug products expands the range of medicines available for self-medication (Zeenot, 2013).

Knowledge, defined as the product of human sensory processes, is influenced by attention and perception during information acquisition. Most knowledge is obtained through auditory and visual senses (Notoatmodjo, 2012). Knowledge also refers to information consciously acquired or recognized by individuals (Agus, 2013). According to the **Indonesian Dictionary (KBBI, 2011)**, knowledge is information gained through learning, influenced by internal factors such as motivation and external factors such as information access and sociocultural conditions.

Cognitive knowledge comprises six hierarchical levels (Notoatmodjo, 2012):

1. **Knowledge (Know)**: Recall of learned material.
2. **Comprehension**: Ability to explain and interpret learned material.
3. **Application**: Ability to use knowledge in real-life contexts.
4. **Analysis**: Ability to break down material into components while maintaining relationships.
5. **Synthesis**: Ability to integrate parts into a new, coherent whole.
6. **Evaluation**: Ability to make judgments based on established criteria.

According to Arikunto (2013), knowledge levels regarding self-medication for menstrual pain are categorized as follows:

- **High** : 76–100% correct responses.
- **Moderate** : 56–75% correct responses.
- **Low** : ≤55% correct responses.

METHOD

This study employed a descriptive design with a cross-sectional approach. Data collection was conducted through a structured questionnaire administered to the study participants. The research utilized a **qualitative design** with a **non-probability sampling** method, specifically **consecutive sampling**, in which participants meeting the inclusion criteria were recruited until the required sample size was achieved, totaling **206 respondents**.

The study **population** consisted of female students at Universitas Nahdlatul Wathan and Politeknik Medica Farma Husada Mataram. The overall target population was all female students in Mataram City. The study **sample** included female students who had purchased non-steroidal anti-inflammatory drugs (NSAIDs) through self-medication practices, yielding a total of 206 respondents.

The sample size was determined using a qualitative descriptive formula:

$$n = \frac{Za^2 \times p \times q}{d^2}$$

Where:

- **n** = sample size
- **Za** = standard normal deviate (α-level)
- **p** = estimated prevalence (84% based on Waji, 2020)
- **q** = 1 – p
- **d** = margin of error

Based on these parameters, the required sample size was calculated to be 206 respondents.

Inclusion and Exclusion Criteria

- **Inclusion criteria**: (1) female students experiencing primary dysmenorrhea, (2) female students who had practiced self-medication for menstrual pain, (3) willingness to participate as respondents.
- **Exclusion criteria**: female students who obtained medications based on a physician's prescription.

Research Instrument

The primary research instrument was a structured questionnaire consisting of **17 close-ended questions**. Such a format was selected for its advantages in guiding respondents' answers and facilitating data processing, although it may limit the breadth of responses. The questionnaire assessed knowledge of self-medication for primary dysmenorrhea across multiple dimensions. Data were collected through **purposive sampling**, with respondents selected according to predetermined inclusion criteria.

Data analysis was conducted using descriptive statistics, specifically frequency distribution and percentages, to describe respondent characteristics and knowledge levels regarding self-medication for primary dysmenorrhea.

RESULT AND DISCUSSION

RESULT

a. Respondents Age

The age characteristics of respondents ranged from 17 to 24 years.

Table 1. Age Characteristics of Respondents

Age (Years)	Frequency	Percentage (%)
17	3	1.5
18	5	2.4
19	46	22.3
20	58	28.2
21	77	37.4
22	11	5.3
23	2	1.0
24	4	1.9
Total	206	100

The majority of respondents were aged 19 to 21 years, with 22.3% aged 19, 28.2% aged 20, and 37.4% aged 21. These findings are consistent with Yanti (2011), who reported that menstrual pain is more common among individuals aged 12 years and older, and with Simanjuntak (2007), who noted that dysmenorrhea typically occurs between the ages of 15 and 25. Adolescents, being emotionally unstable and often lacking adequate knowledge about menstruation, are particularly vulnerable to menstrual pain.

b. Primer Pharmacological Management of Primary Dysmenorrhea

Table 2. Pharmacological Treatments Used by Respondents

Pharmacological Treatment	Frequency	Percentage (%)
Mefenamic Acid	88	42.7
Paracetamol	61	29.6
Ibuprofen	57	27.7
Total	206	100

The majority of respondents reported using mefenamic acid (42.7%), followed by paracetamol (29.6%) and ibuprofen (27.7%). These findings indicate that NSAIDs were the preferred pharmacological treatment. According to Hanifah (2009), NSAIDs such as aspirin, ibuprofen, and mefenamic acid effectively alleviate dysmenorrhea by inhibiting prostaglandin synthesis and

activity. They are most effective when initiated two days before menstruation and continued for one to two days after its onset.

c. Non-Pharmacological Management of Primary Dysmenorrhea

Table 3. Non-Pharmacological Treatments Used by Respondents

Non-Pharmacological Treatment	Frequency	Percentage (%)
Massage	52	25.2
Warm Compress	78	37.9
Drinking Warm Water	76	36.9
Total	206	100

Respondents commonly employed non-pharmacological strategies such as warm compresses (37.9%), drinking warm water (36.9%), and massage (25.2%). These approaches are often chosen because they are accessible and can be implemented immediately when pain occurs (Darmansjah, in Erlina, 2014). Non-pharmacological methods are important alternatives that can complement or substitute pharmacological treatments (Lowdemik et al., 2013; Laila, 2011). Hudson (2007) emphasized that such approaches may be applied across mild to severe dysmenorrhea, either alone or in combination with pharmacological therapy, to optimize outcomes.

d. Respondents Knowledge of Self-Medication for Primary Dysmenorrhea

Knowledge was assessed across eight indicator categories, as:

1. **Definition of Dysmenorrhea**: 96.1%–100% answered correctly.
2. **Types of Dysmenorrhea**: 95.1%–100% answered correctly.
3. **Causes and Prevention**: 70.4% recognized heredity as a factor; 80.1% agreed daily exercise reduces pain.
4. **Related Conditions**: 67.5%–89.3% answered correctly.
5. **Pharmacological & Non-Pharmacological Therapy**: 87.4%–95.6% answered correctly.
6. **Drug Administration Rules**: 79.6% answered correctly on timing of analgesic use.
7. **Drug Use and Stability**: 93.7% correctly rejected expired drug use; however, 53.9% mistakenly believed crumbling tablets were still consumable.

8. **Side Effects**: 79.6%–85.9% acknowledged the potential side effects of analgesics.

Respondents demonstrated relatively high knowledge in most areas, although misconceptions regarding drug stability (e.g., use of deteriorated tablets) were noted. This suggests a need for further education about pharmaceutical quality and safety. NSAIDs, though widely used, can cause side effects such as gastrointestinal disturbances (nausea, vomiting, dyspepsia, constipation, mucosal irritation), skin erythema, and headaches (Wiknjosastro, 2007; Tugushi, 2011). Proper knowledge of dosage and administration schedules is therefore essential to ensure safe and effective self-medication.

Table 4. Over all Knowledge of Self-Medication for Primary Dysmenorrhea

Knowledge Level	Frequency	Percentage (%)
High	**150**	**72.8**
Moderate	**47**	**22.8**
Low	**9**	**4.4**
Total	**206**	**100**

DISCUSSION

The results of this study demonstrate that the majority of respondents possess a high level of knowledge regarding self-medication for primary dysmenorrhea. This finding aligns with previous research conducted by Waji (2020), which reported that most respondents also exhibited a high level of knowledge in managing primary menstrual pain. Adequate knowledge is a critical factor in enabling individuals to choose appropriate therapeutic options and in reducing the risk of medication errors.

Analysis of individual knowledge indicators revealed that respondents generally understood the definition, causes, and clinical characteristics of primary dysmenorrhea, as well as appropriate strategies for its prevention and management. Both pharmacological and non-pharmacological approaches were well recognized by respondents. For pharmacological management, non-steroidal anti-inflammatory drugs (NSAIDs), particularly mefenamic acid, paracetamol, and ibuprofen, were most frequently reported, consistent with recommendations in the literature for reducing prostaglandin-mediated uterine contractions (Hanifah, 2009; Osayande & Mehulic, 2014). Non-pharmacological measures such as warm compresses, drinking warm water, and

massage were also commonly practiced, reflecting practical strategies accessible without medical intervention (Hudson, 2007; Laila, 2011).

Despite the high overall knowledge level, certain misconceptions persisted. Some respondents demonstrated limited awareness regarding drug stability, with a proportion incorrectly assuming that expired or physically degraded medications could still be consumed. This highlights the importance of reinforcing knowledge about drug safety and stability, as inappropriate use may reduce therapeutic efficacy and increase health risks (BPOM, 2014). Similarly, although most respondents understood the potential side effects of NSAIDs, continued health education remains necessary to ensure rational use and minimize adverse outcomes.

The demographic characteristics of respondents, particularly age, appear to influence their knowledge level. As suggested by Budiman and Riyanto (2013), increasing age and educational exposure contribute to improved comprehension, information-seeking behavior, and decision-making regarding health practices. In this study, the predominance of respondents within the 19–21year age range may have supported the higher levels of knowledge observed.

Overall, these findings emphasize the significant role of health education in shaping rational self-medication behavior. High knowledge among health students suggests that educational background is a key determinant in the safe and effective management of primary dysmenorrhea. However, gaps in knowledge regarding medication safety underline the need for ongoing health promotion and pharmacist-led counseling to strengthen safe self-medication practices.

CONCLUSION

Based on the findings of this study, it can be concluded that the level of self-medication knowledge regarding primary dysmenorrhea among female health students in Mataram City is classified as high. This indicates that the majority of respondents are able to understand the definition, causes, prevention, pharmacological and non-pharmacological management, appropriate medication use, as well as the potential side effects of drugs used for primary dysmenorrhea. The results also suggest that adequate knowledge may contribute to minimizing medication errors in self-medication practices. Future studies are recommended to further examine the relationship between the level of knowledge and the actual self-medication behavior of students in managing primary dysmenorrhea.

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