

Comparison of Knowledge and Behavior of Menstrual Self-Medication between Junior High School Students and Public Health Students

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ABSTRACT

The purpose of this study was to compare the health status of students in Junior High School and lecturers at the Faculty of Public Health, UIN North Sumatera, totalling 87 respondents. To compare the results of each group, data analysis was performed using the Chi-square statistical test, t-test, and regression analysis. The findings of the research study showed that 89% of female students had very good attitudes/behaviours indicating that self-medication, compared to 86% of junior high school students. Knowledge was found to be good in 52% of female students and only 40% of junior high school students in this category. From menstruation, 44% of female students and 41% of junior high school students reduce menstruation with at least warm water, while 70% of female students and 60% of junior high school students do not take any medicine. About 68% of female students first experienced menstruation in junior high school, while 48% of junior high school students first experienced menstruation in elementary school. The practical implication of this concept is the need for menstrual education based on knowledge and skills from birth, especially for junior high school students, in order to improve their ability to handle menstruation efficiently. The findings of this study indicate that in terms of menstrual self-medication, university students have a higher level of knowledge and maturity compared to junior high school students.

Keywords: Female Student; Middle School Students; Menstruation; Self-medication

INTRODUCTION

Periodic bleeding from the uterus caused by the shedding of the uterine endometrial layer, which begins about fourteen days after ovulation, is called menstruation. (Nugrahani, 2013). The release of the uterine wall (endometrium) accompanied by bleeding and occurs repeatedly every month except at certain times is called menstruation. Because the egg is not fertilized by sperm cells in the uterus, menstruation occurs. The egg attaches to the uterine wall and forms a layer containing many blood vessels; then, this layer thins and exits through the mouth of the uterus and vagina in the form of blood, a process that usually occurs over three to seven days. Not all women have a 21-day gap between the first and next menstruation; however, some can reach 35 days. (Deviliawati, 2020).

Why is it important to understand the differences between knowledge levels and self-medication behaviours, especially regarding the potential health risks of inappropriate medication use, and its role in supporting the development of better public health education programs? One of the most common methods used by women to manage their menstrual symptoms is using self-medication to stop menstruation. However, uninformed self-medication behaviours can risk causing undesirable health effects, such as inappropriate or excessive use of medication. Age, education level, and health background can influence an individual's knowledge and self-medication behaviour. Compared to public health students who have formal education in health, junior high school students may have limited access to relevant health information. Therefore, it is important to investigate the differences in knowledge levels and self-medication behaviours between them and public health students. Understanding these differences can create better and appropriate health education interventions for each group to increase public awareness and safe self-medication practices. For women, menstruation is a regular and natural occurrence. Monthly recurrent bleeding follows the shedding of the uterine wall during the menstrual cycle (Meilan & Fillona, 2018). A typical

menstrual cycle lasts three to seven days and lasts between twenty-one and thirty-five days. Pads are changed two to six times a day, and the maximum amount of blood during menstruation is 80 millilitres. A menstrual cycle lasting more than 35 or less than 21 days is considered irregular.

Self-medication or self-medication is selecting one's own medicine to manage or treat diseases and symptoms (WHO, 2000). Self-medication is the practice of using inexpensive and readily available drugs to address self-related problems. Initiative is the foundation of this activity (Tan & Rahadja, 2010). Many additional viewpoints have been expressed regarding self-medication, which is defined as the act of obtaining and ingesting medication without the guidance, diagnosis, treatment, or supervision of a physician. Self-medication is usually used to treat minor illnesses and diseases common in the community, such as fever, pain, dizziness, cough, influenza, stomach ulcers, worms, diarrhea, skin conditions, and others (Ali et al., 2012).

Puberty is one of two periods in the life span characterized by rapid growth and striking changes. Puberty brings about doubts, feelings of inadequacy, and insecurity and usually leads to bad behaviour. According to Santrock's research, the physical changes during puberty occur rapidly and are accompanied by cognitive, moral, psychological, and social changes. If these changes are not followed by the ability of adolescents to adapt, various problems arise (Triyanto, Setiyani, and Wulansari, 2014). One of the main problems adolescents faces is the ignorance of what to do related to the development they are experiencing. In particular, adolescents have problems with their knowledge about puberty and how they behave towards these changes (Rosita, Ikawati, and Saleh, 2023). Uterine muscle spasms cause cramping pain in the lower abdomen, which limits normal activities and requires treatment. This is known as menstruation, which is a complaint that women often experience 40-80% of women complain about this. 1,769,425 people worldwide (90%) experience dysmenorrhea, with 10-15% of women experiencing it. The incidence of menstrual pain is very high worldwide, with over 50% in every country. In the United States, the presentation of dysmenorrhea is about 60%, and in Sweden, it is about 72%. Studies have shown that dysmenorrhea is very common in Turkey, between 50 and 90%, in Georgia, 55.5% of India, 71.4%, and 20 percent of people experience severe dysmenorrhea that interferes with daily activities (Nuralam, Dharmayanti, and Jumhati, 2020). The data also shows that women aged 10-59 years in Indonesia experience regular menstruation as much as 68%, and the problem of irregular menstruation in 1 year is 13.7%. Women aged 17-29 years and 30-34 years also experienced irregular menstrual problems, as much as 16.4%. Women aged 10-59 years said that stress and many thoughts were the causes of irregular menstruation (Salmawati, Usman, and Fajariyah, 2022).

One problem that young women often experience is dysmenorrhea, also known as menstrual pain. Menstruation that is accompanied by cramps and enormous pain is called menstruation. Menstruation can cause menstrual pain for one to several days. More than 50% of women experience period pain, which is one of the most common health problems. In 10% of women, menstrual pain causes them to be unable to perform daily activities for one to three days each month. Due to pain, approximately 25% of teenagers refuse to go to school. Many things can cause menstrual pain. Some are psychiatric factors, constitutional factors, such as anaemia, chronic diseases, older age, genetic factors of cervical canal obstruction, endocrine factors, and allergic factors. The two types of menstrual pain are primary menstrual pain and secondary menstrual pain. Primary menstrual pain is most severe on the first and second day of menstruation. There are two ways to treat menstrual pain: pharmacologically with medication and nonpharmacological with adequate rest, regular exercise (e.g., walking), drinking warm water, and applying warm compresses to the abdomen. By using warm compresses, blood circulation becomes smoother, vascularization becomes smoother, and vasodilation occurs. As the muscles get nutrients from the blood, muscle contraction is reduced. (Rahmadhayanti, Afriyani and Wulandari, 2017). The menstrual cycle is the period that begins on the first day of menstruation and ends on the next menstrual day. In the female menstrual cycle, menstrual cycle disorders include polymenorrhagia (35 days) and amenorrhea (more than 3 months) (Sitoayu, Pertiwi, and Mulyani, 2017). The hypophysis's

anterior lobe secretes FSH, one of the primary follicles that can develop in the ovary during the menstrual cycle. In most cases, one follicle, sometimes more than one, develops into a degraft follicle, which produces the second gonadotropin hormone, LH (Luteinizing Hormone), and FSH.

RH secretes LH from the hypothalamus to the pituitary. Adolescents usually experience this cycle when they are 17- 18 years old, but it can also occur after 3-5 years from the age of menarche. Menstruation usually takes place once every 21 to 35 days but can sometimes last up to 3 to 7 days. If the length of menstruation and blood volume changes every month, the menstrual cycle is categorized as irregular. Menstrual cycle disorders can include oligomenorrhea, oligomenorrhea, and amenorrhea (Purwati & Muslikhah, 2021). Polymenorrhagia consists of a menstrual cycle that has a day of less than 21 days and a blood volume equal to or greater than usual. If there is this problem, it indicates a problem with the ovulation process or a short luteal phase. Since the egg cannot mature, polymenorrhagia prevents fertilization. A menstrual cycle that lasts more than 35 days is called oligomenorrhea, and the volume of bleeding is usually less than usual. Due to this disorder, eggs are rarely produced, so fertilization does not occur. Women who experience oligomenorrhea do not experience danger, but the inability to ovulate can cause difficulty conceiving (Islamy & Farida, 2019).

For women, pain not only interferes with activities but also causes fatigue, fatigue, back pain, acne, fatigue, breast fullness, and pain. Students with mild pain got responses with results of (5%), and students with moderate pain amounted to (41%). Menstrual pain occurs a lot and is found in high school students. To overcome menstruation, most high school students do not take drugs, with respondents as many as (60%) and female students as many as (70%). Thus, research needs to be done to find out the pattern of menstrual self-medication among female students and junior high school students.

METHOD

This study uses descriptive quantitative research to describe the behavior, knowledge, and description of female Faculty of Public Health UIN North Sumatra Medan students about self-medication with junior high school students of Yayasan Pendidikan Sholihin. This behavior measures how a person acts or responds to menstrual self-medication physically or verbally. Knowledge measures understanding information or facts about something they know through learning or experience. The picture measures how a person sees and interprets based on their experiences during menstruation; from this picture, we can find out how they view menstrual self-medication. The survey method is one of the quantitative research methods used to collect primary data by asking respondents questions. This data collection method uses a questionnaire sent via Google form.

This research study was conducted at the Faculty of Public Health of UIN North Sumatra as part of the Public Health Science Program. The study was conducted from October to November 2024. This study involved all 1st-semester Faculty of Public Health UIN North Sumatera Medan students and junior high school students of Sholihin Education Foundation. Researchers used the non-probability sampling technique and the accidental sampling method. This method was carried out by distributing questionnaires with Google form links through the WhatsApp group per 1st-semester public health student, while for junior high school students, questionnaire links were distributed through teachers who taught at the Sholihin Education Foundation Junior High School who were willing to become respondents and then fill out the online questionnaire voluntarily. The target respondents were 44 female Faculty of Public Health UIN North Sumatra students and 43 junior high school students of the Sholihin Education Foundation.

At the beginning of the questionnaire, you will find the purpose of the study, the principle of voluntary participation, and how respondents' data is protected. After students willing to become respondents confirmed their informed consent, they completed the questionnaire. The data collected from these respondents was then analyzed and selected according to the inclusion criteria of this study, which included:

1. Respondents are active students on the campus (based on data on the PDDIKTI website)

2. Respondents are active junior high school students at the school (based on data on the Dapodik Siswa website)
3. Declared willingness to become a respondent informed consent
4. Aged 12-21 years old
5. Is a female student who studies at a campus located in the Medan City area
6. Is a junior high school student who attends a school located in Medan city area
7. Willing to answer all questions on the questionnaire

Furthermore, the percentage of respondents who answered the questions correctly was used to evaluate the picture of respondents' knowledge and efforts regarding self-medication. Attitude/behavior was considered excellent if the score was between 31-40, good between 21-30, poor between 11-20, and poor between 40-6%.

RESULT AND DISCUSSION

The following table shows the description of the research respondents:

Table 1. Respondents Characteristic

Characteristic	n	%
Junior High School Students	43	49,42%
College Students	44	50,58%
Age		
12-14 years	22	25,2%
15-16 years	21	24%
17-19 years	39	45%
20-21 years	5	5,8%

Based on the table above, shows that the number of respondents in this study came from students of the Faculty of Public Health and high school students of the Shaolin Education Foundation, totaling 87 respondents consisting of 44 people (50.58%) female students and female students consisting of 43 people (49.42%). The following distribution of respondents was also based on gender; the respondents in this study were female. The age of the female respondents ranged from 17-21 years. For female students aged 17-19 years consisting of 39 people (45%) and those aged 20-21 years consisting of 5 people (5.8%). The age of the female respondents ranged from 12 to 16 years old. High school students aged 12-14 years consist of 22 people (25.2%) and those aged 15-16 numbered 21 people (24%). Based on the table above, most female respondents are 17-19 years old. The respondents are junior high school students who are primarily aged in the range of 12-14 years.

Some of the figures below show the survey results of menstrual self-medication behaviors/attitudes among female high school students:

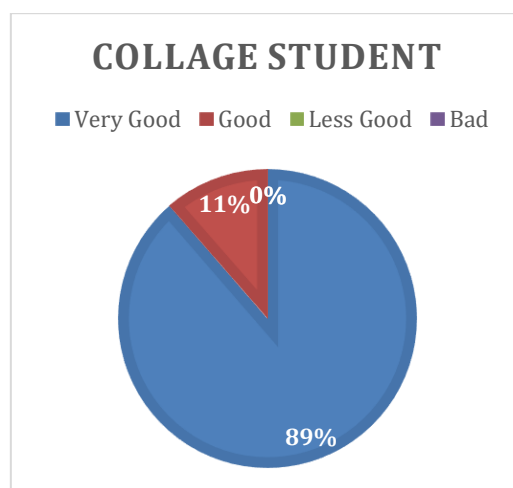


Figure 1. Attitude/Behavior Diagram of College Students

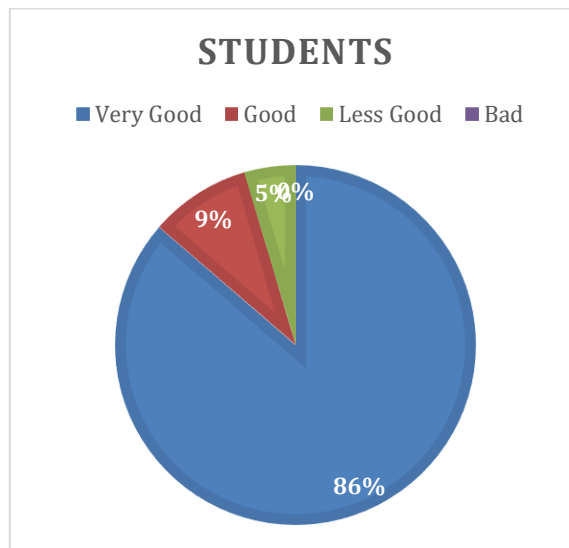


Figure 2. Student's Attitude/Behavior Diagram

Based on the survey results above, attitude and behavior also showed similar differences. Most female students (89%) had an excellent attitude/behavior in dealing with menstrual self-medication issues, while 86% of junior high school students showed the same behavior. Although there is a slightly lower percentage of junior high school students, both groups have a pretty good attitude toward menstrual self-medication. However, in terms of menstrual pain management, female students tend to choose more diverse methods, such as avoiding drugs, which shows their awareness of non-pharmacological treatment options.

The previous study showed that adolescent girls in SMA Negeri 3 Kota Cilegon had data showing adequate knowledge with mean \pm SD (65.39 \pm 14.43), adequate attitude with mean \pm SD (69.73 \pm 10.56), and adequate behavior with mean \pm SD (67.21 \pm 13.56). Spearman correlation test was used to see how knowledge, attitude, and behavior relate to each other. The results, with a p-value of 0.000, showed a significant relationship between knowledge level and attitude and behavior. This significance value shows a strong positive relationship, indicating that adolescent girls in SMA Negeri 3 Kota Cilegon understand menstrual pain self-medication better, which is also seen in their better attitude and behavior towards the problem.

The results of the menstrual self-medication knowledge survey between female college students and junior high school students can be seen in some of the figures below:

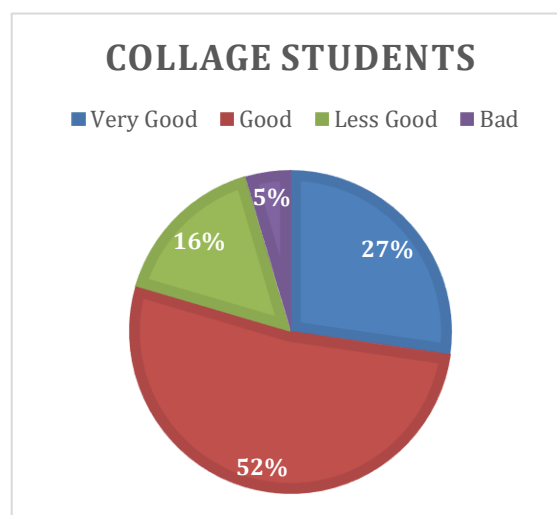


Figure 3. Collage Student Knowledge Diagram

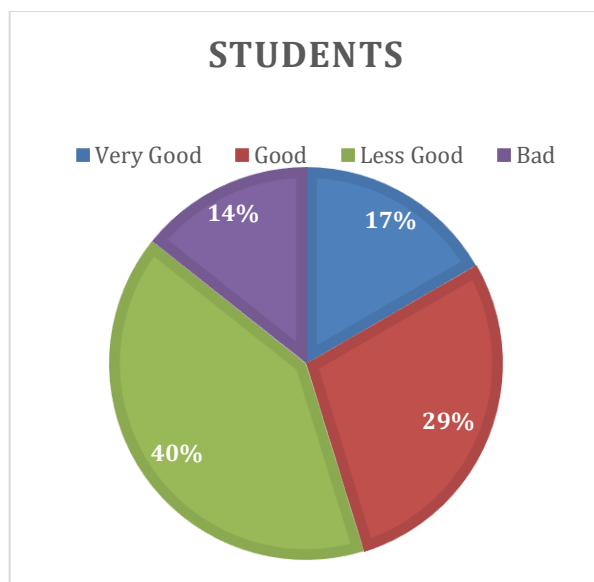


Figure 4. Students Knowledge Diagram

The research shows significant differences in knowledge, attitudes, and behavior of menstrual self-medication between female students of the Faculty of Public Health and female students of SMP Yayasan Pendidikan Sholihin. Female students tend to have a higher level of knowledge related to menstrual self-medication compared to female students. As many as 52% of female students have good knowledge about menstrual self-medication, while only 40% of female students have this knowledge. This suggests that higher levels of education and experience among female students play an important role in their understanding of reproductive health issues, especially those related to menstruation.

This study's results align with previous research showing that female students of the Faculty of Medicine USU Class of 2020 are in line with these new findings. Of the 156 respondents (98.1%), everyone knew about menstrual pain well; 76 people (47.8%) knew, and 28 people (17.6%) did not know. The majority of new FK USU students in the class of 2020 rested, namely 157 people (15.92% of the total). Decision: The number of dysmenorrhea cases reported in the 2020 batch of FK USU female students is very high. Therefore, gaining a good understanding of the problem of menstrual pain will help efforts to treat menstrual pain appropriately, both pharmacy and non-pharmacy.

The results of the survey on the description/efforts of menstrual self-medication among female students and female students can be seen in some of the figures below:

Question: What is the level of pain you feel during your period?

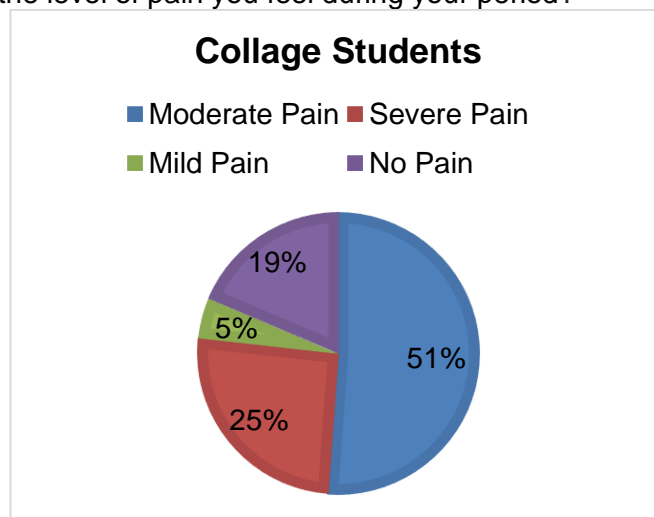


Figure 5. Collage Students Overview Diagram

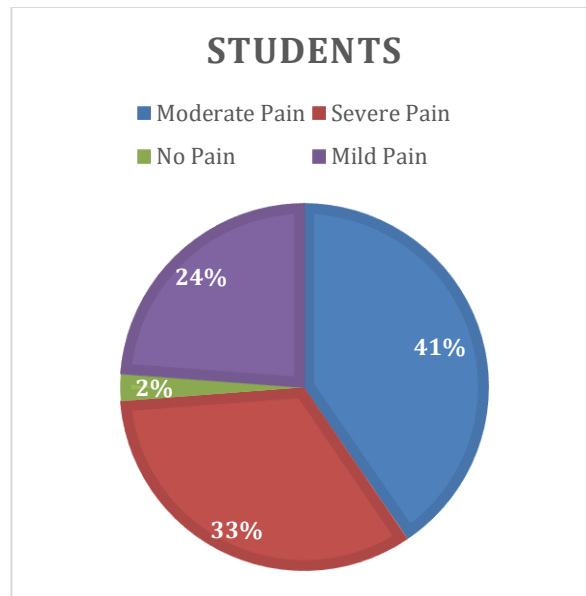


Figure 6. Students Overview Diagram

The level of pain experienced during menstruation also shows differences. The survey results showed that 51% of female students experienced moderate pain, while only 41% of junior high school students reported the same. Although the difference is not too significant, it illustrates that female students tend to be more aware of how to manage their menstrual pain. In contrast, junior high school students may still rely on more straightforward and less effective methods.

Question: Stock up on your most preferred medicine for menstruation.

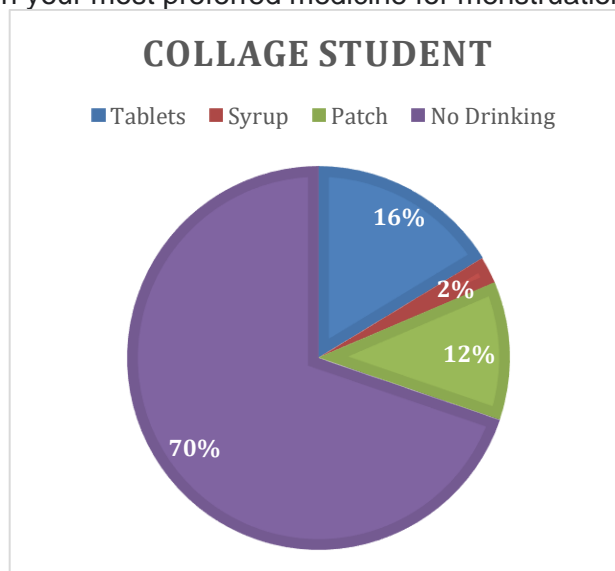


Figure 7. Collage Students Overview Diagram

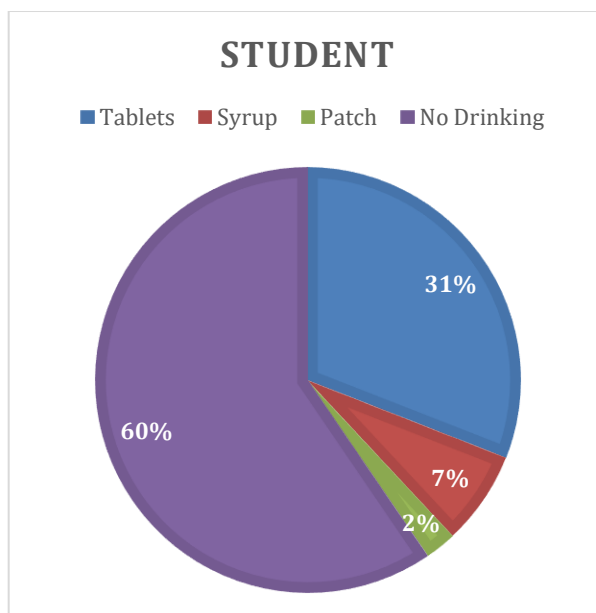


Figure 8. Students Overview Diagram

In addition, self-medication habits among female students are more likely to choose more natural methods and not consume drugs. 70% of female students chose not to take medication to manage their periods, compared to 60% of junior high school students. This choice reflects their better understanding of more natural menstrual management and may favor non-pharmacological solutions.

Question: When did you first experience your period?

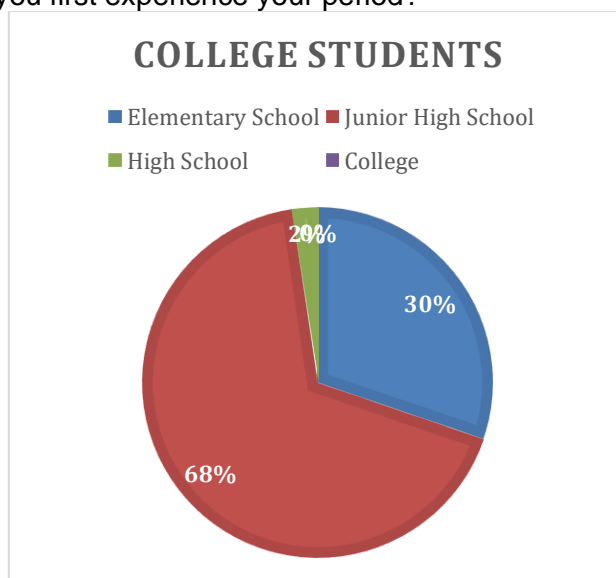


Figure 9. Collage Students Overview Diagram

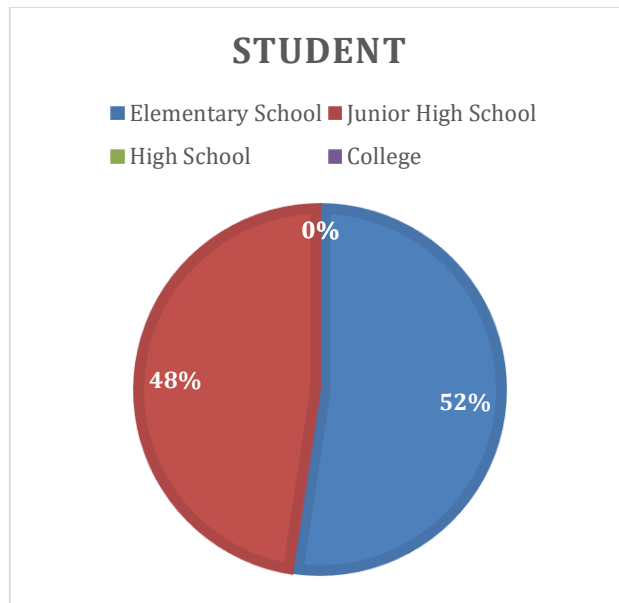


Figure 10. Students Overview Diagram

Based on the results of the diagram above, several questionnaire questions assess the description of menstrual self-medication; these questions provide an overview of the level of description of menstruation between female and female high school students. From the two diagrams above, it can be concluded that female college students first experienced menstruation at the junior high school level (68%), while female high school students at the elementary school level (52%) in the description of menstruation. Thus, in this case, female students experienced their first menstrual period at the junior high school level while female students were at the elementary school level.

Question: What do you do to reduce menstrual pain?

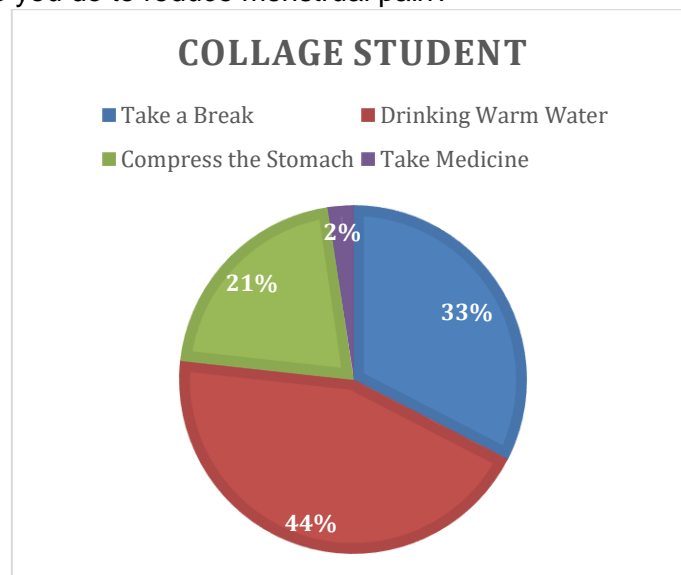
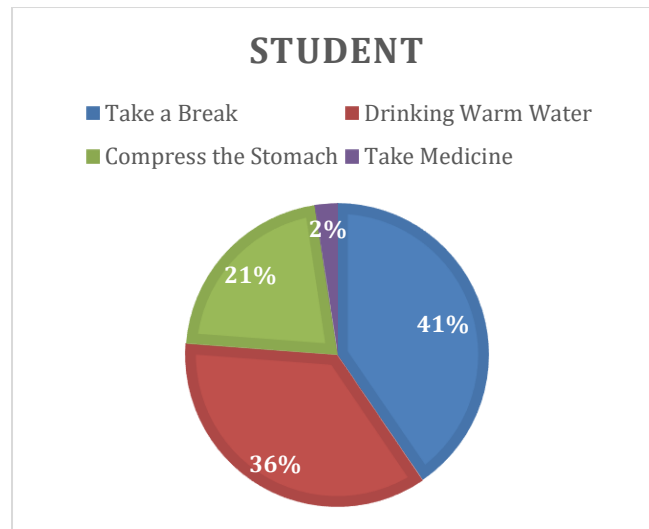


Figure 11. Collage Students Overview Diagram



Gambar 12. Students Overview Diagram

Based on the results of the above diagrams, several questions in the questionnaire were used to evaluate people's understanding of menstrual self-medication; these questions also provide an overview of the level of menstrual description between female and female high school students. From the two diagrams above, it can be concluded that female students reduce menstrual pain by drinking warm water (44%) while female high school students by resting (41%) in the description of menstruation. Thus, in this case, female students have a higher description level than junior high school students.

The results of this study are in line with the findings of previous research on 23 adolescents who experience dysmenorrhea every time they menstruate. Adolescent girls who treat dysmenorrhea with non-pharmacological self-medication, as many as 25 (83%) do adequate rest to prevent menstrual pain, and adolescent girls who treat pharmacologically as many as 8 (27%) take anti-pain medication.

To analyze the research data in the context of inferential statistics, we need to perform several steps to test whether there is a significant difference between junior high school students and female students of the Faculty of Public Health UIN North Sumatra in terms of knowledge, behavior, and description of menstrual self-medication. Depending on the type of data and questions asked, this analysis can be done using statistical tests such as the t-test, chi-square test, and regression analysis.

1. Data Description and Hypothesis

This study collected data from two groups of respondents: 43 junior high school students and 44 female students of the Faculty of Public Health. The variables analyzed included knowledge, behavior, and description of menstrual self-medication. Based on the survey results, we can identify some key variables:

- Knowledge: Measures the extent to which respondents understand menstrual self-medication.
- Behavior: Measures how respondents act in dealing with menstrual self-medication issues.
- Self-medication Overview: Measures how respondents deal with the problem of menstrual pain.
- Hypothesis:
 - Null hypothesis (H0): There is no significant difference between junior high school and college students' knowledge, behavior, and description of menstrual self-medication.
 - Alternative hypothesis (H1): There is a significant difference in knowledge, behavior, and description of menstrual self-medication between junior high school students and female college students.

2. Inferential Statistical Testing

a. Chi-Square Test for Categorical Variables

One way to analyze categorical data, such as behavior and knowledge in this survey, is to use the chi-square test. This test determines if there is a significant relationship between two categorical variables. For example, we can test whether there is a significant difference in the behavior category between junior high school and college students.

Steps:

1. Create a contingency table for behavior or knowledge.
2. Calculate the expected frequency for each category.
3. Calculate the chi-square statistic with the formula:

$$\chi^2 = \sum \frac{(O - E)^2}{E}$$

Where O is the observed frequency and E is the expected frequency.

4. Determine the p-value to see if the results are significant (usually using a significance level 0.05).

Example of behavior analysis:

- College student: 89% excellent, 11% good.
- Junior high school student: 86% perfect, 9% good, 5% poor.

The contingency table will show whether the distribution of these categories is significantly different between the two groups. If the p-value is smaller than 0.05, then we can reject the null hypothesis and conclude that there is a significant difference.

b. T-test for Comparison of Means

Since this study also compares the level of knowledge and the picture of self-medication, which is measured in the form of a numerical scale, we can use the t-test for independent samples. This test is used to compare the means of two independent groups, in this case female and female junior high school students.

Steps:

1. Calculating the mean and standard deviation for each group (female and female junior high school students).
2. Calculating t statistics with the formula:

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s_1^2/n_1 + s_2^2/n_2}}$$

where \bar{X}_1 and \bar{X}_2 are the means for groups 1 and 2, s_1^2 and s_2^2 are the variances of each group, and n_1 and n_2 are the sample sizes for each group.

3. Determine the p value to check whether the difference between the means is significant.

Knowledge analysis example:

- College student: 52% good.
- Junior high school student: 40% unfavorable.

A mean comparison between the two groups can be done to see if there is a significant difference in their knowledge of self-medication.

c. Regression Analysis for Continuous Variables

Regression analysis may be an option if we want to examine the factors that influence the level of knowledge or self-medication behavior. For example, we can evaluate whether age or first menstrual experience affect knowledge about menstrual self-medication.

Steps:

1. Determine the independent (e.g., age or first menstrual experience) and dependent (knowledge or behavior) variables.
2. Calculating regression coefficients with the formula:
$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \epsilon$$

where Y is the dependent variable (knowledge or behavior), X_1, X_2, \dots, X_n ,

X_1, X_2, \dots, X_n are independent variables, β_0 is a constant, and ϵ is an error.

3. Assess the significance of the regression coefficients with a p-value of.

3. Interpretation of The Results

After testing the hypotheses using relevant statistical tests, the results can be analyzed as follows:

- **Self-medication Behavior:** The chi-square results show that female students' attitudes/behaviors are better in dealing with self-medication problems than junior high school students. This suggests that female college students are more educated on appropriate ways to manage menstrual pain and self-medication than junior high school students, who may be less educated in this regard.
- **Knowledge of Self-Medication:** The t-test or chi-square indicated that female students had a better level of knowledge than junior high school students. This suggests that higher education, as received by female students, positively influences their knowledge of self-medication.
- **Self-medication picture:** Female college students tended to choose not to take medication to manage menstruation, reflecting their better understanding of non-pharmacological options. Despite having good attitudes/behaviors, junior high school students prefer to rest or take medication to deal with the problem.

A woman's menstrual cycle can change every month, leading to menstrual abnormalities. Conditions such as premenstrual syndrome, dysmenorrhea, menorrhagia, hypermenorrhagia, and more can appear while menstruation is in progress, both before and after menstruation. Studies show that dysmenorrhea is the most common menstrual problem. One factor that affects menstruation is stress. Stress is the body and mind's reaction to pressure, creating tension and disrupting daily routines. In response to increased HPA (Hypothalamic Pituitary Adrenal) during stress, the hypothalamus releases CRH (Corticotrophic Releasing Hormone). In turn, the anterior pituitary gland releases adrenocorticotrophic hormone, or ACTH. This hormone promotes the release of cortisol in the adrenal cortex. In the hypothalamus, cortisol production is inhibited by gonadotropin-releasing hormone (GnRH). As a result, the menstrual cycle is affected by suppressing the release of luteinizing hormone (LH), which affects the synthesis of progesterone and estrogen hormones. (Ilham et al., 2022) Menstrual problems are related to late menstruation. The average age of menarche in Indonesia is 13 years (20.0%). An underdeveloped hypothalamic-pituitary-ovarian axis may indicate a temporary late period. Considering this, the authors are interested in finding variables that affect the regularity of adolescent menstrual cycles. The purpose of this study is to find and examine these variables.

The survey results showed that the attitudes and behaviors of junior high school students at the Faculty of Public Health of the State Islamic University in North Sumatra and the Sholihin Education Foundation in Tanjung Morawa, Deli Serdang Regency, regarding menstrual self-medication were excellent. Figure 1 shows a female student presentation rate of 89%, and Figure 2 shows a female student presentation rate of 86%. The female student presentation rate at the Faculty of Public Health, State Islamic University, was 86%.

Based on the survey results, students at the Faculty of Public Health, State Islamic University of North Sumatra, have good knowledge about menstruation, as shown in Figure 3. 52% of female students know more about menstruation than junior high school students, and 40% know less about menstruation. Junior high school students at the Sholihin Education Foundation also have good knowledge about menstruation.

The success rate of the description/efforts of self-medication in students at the Faculty of Public Health, State Islamic University of North Sumatra, and junior high school students at the Sholihin Education Foundation in Tanjung Morawa, Deli Serdang Regency is as shown in Figure 5 as many as 51% of female students experience moderate pain at the level of menstrual pain, and in Figure 6 as many as 41% of female students experience moderate pain at the level of menstrual pain, here it can be seen that female students and female students

have no comparison because both experience menstrual pain at the level of moderate menstrual pain with a difference of 10%. After that, in Figure 7 as many as 70% of female students do not take medicine in relieving menstrual pain and in Figure 8 states as many as 60% of female students do not take medicine in relieving menstrual pain, it can be concluded that female students and female students in relieving menstrual pain do not take drugs at all with a difference in comparison of 10%, and in Figure 9 with a percentage of 68% of female students experienced their first menstruation at the junior high school level, and at the junior high school level, Figure 10 states that 48% of female students experience their first menstruation, it can be concluded that female students and female high school students mostly experience their first menstrual period at the junior high school level with a difference in comparison of 20%, and in Figure 11 as many as 44% of female students reduce menstrual pain by drinking warm water, and in Figure 12 as many as 41% of female students reduce menstrual pain by resting, it can be concluded with the last picture that there is a difference between female students and female high school students with female students to reduce menstrual pain by drinking warm water while female students by resting alone.

Based on the results of inferential statistical analysis, it can be concluded that there are significant differences between junior high school students and female college students in knowledge, behavior, and description of menstrual self-medication. Female students showed better understanding and behavior in dealing with menstrual pain and self-medication, most likely due to higher education levels. Therefore, it is important to provide further education on self-medication to junior high school students so that they can better manage their menstrual health.

Literature shows that self-medication behavior is often influenced by individual experience and knowledge. A study by Hidayati (2020) noted that individuals with better knowledge tend to choose more diverse and effective treatment methods for menstrual pain. The finding that 70% of female college students chose natural methods suggests that they are more aware of non-pharmacological options, which is also supported by other studies showing similar trends among adult women.

In the context of menstrual pain management, research by Sari (2019) found that young women who have access to health information tend to be more able to manage their menstrual pain effectively. The survey results that showed 51% of female students experienced moderate pain compared to 41% of junior high school students can be interpreted as an indication that female students are better able to apply good pain management strategies.

Given the importance of education in improving knowledge and self-medication behavior, it is recommended that reproductive health education programs in junior high schools be strengthened. Research by Rahmawati (2021) emphasizes the need for an integrated curriculum to provide adolescents with evidence-based information on menstrual health. By linking the results of this analysis with other literature, we can see the importance of education and information in improving understanding and self-medication behavior among adolescents. Efforts to improve reproductive health education at the junior high school level are crucial to ensure young people have the necessary skills and knowledge to manage their health independently.

CONCLUSION

This study concludes that most female students' menstrual knowledge level is in the good category (52%), while most female students are in the unfavorable category (40%). The majority of female students' behavioral attitudes are in the outstanding category (89%), while the majority of female students are in the outstanding category (86%). Students with a presentation of (60%), the third picture of when they first experienced menstruation, female students and junior high school students experienced more menstruation at the junior high school level with a presentation (68%) in female students while junior high school students at the elementary school level with a presentation (48%), and in the fourth picture of how to reduce menstrual pain female students prefer to reduce menstrual pain by drinking warm water with a presentation (44%). In comparison, junior high school students choose to rest

with a presentation (41%). The results of this study have real benefits in supporting health education in schools and on campus. It is essential to increase knowledge about reproductive health, especially about menstruation, because there are differences in knowledge levels between female and female junior high school students. The school curriculum can include more in-depth material on menstruation, such as maintaining menstrual hygiene and managing menstrual pain. Teachers can also be trained to deliver appropriate and sensitive information to their students. In university settings, more specialized education sessions can be provided, such as seminars or health orientation programs for first-year students, to expand their knowledge that may have previously been limited. In addition, women who experience menstrual pain may feel more comfortable participating in learning activities if schools and campuses provide supportive facilities, such as restrooms, warm water, or access to health counsellors. To ensure that the information provided is accurate and suits the needs of students and college students, collaboration between educational institutions and health workers is essential. This effort is expected to increase knowledge and awareness of the importance of maintaining overall reproductive health.

This study found that structured interventions are needed to improve female college and junior high school student's knowledge about menstruation. More customized intervention programs can be created to meet the needs of each group and improve knowledge and self-medication behaviour. Interactive-based reproductive health education programs such as games, simulations, and group discussions can be initiated in schools. Further understanding of the biological process of menstruation, the importance of maintaining menstrual hygiene, and appropriate self-medication methods for menstrual pain, such as using warm water, relaxation, and light exercise, can be part of the program. Second, to help students, learning institutions can invite health experts to provide information about menstruation and self-medication based on scientific evidence. They can also develop digital modules or mobile apps with information on menstruation and self-medication that can be accessed anytime. Third, peer mentor programs on campuses and educational institutions can effectively improve two-way communication. In this program, senior students or students trained can become mentors for their peers to share knowledge and experience about menstrual management and how to cope with pain independently. Fourth, schools and campuses can collaborate with local health centres or clinics to provide routine reproductive health consultations. This consultation can be done face-to-face or through online media. This allows students to get relevant information and medical support if needed. With this intervention program, it is expected that higher knowledge and self-medication behaviour can be achieved. This will give women the ability to manage their reproductive health independently and in the most effective way.

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