



## **Insight about Menstrual Cups on Student of the Faculty of Pharmacy and Health Science, Abdurrab University**

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*Received: 02-12-2023*

*Reviewed: 03-12-2023*

*Accepted: 08-12-2023*

### **Abstract**

Menstrual cup is a cup-shaped device used during menstruation that is made from silicone so it is environmentally friendly. Menstrual cups are still not widely accepted in the society and are less desirable than sanitary pads. This study aims to determine the description of knowledge about menstrual cups in students of the Faculty of Pharmacy and Health Sciences, Abdurrab University in 2022. This research method is quantitative research with descriptive design. In this study using cluster random sampling technique so that the number of samples used was 260 students using a questionnaire consisting of 20 questions distributed via googleform. The results of this study showed that the knowledge of female students was in the good category of 175 people (67.3%), 76 people (29.2%) had sufficient knowledge and had less knowledge as many as 9 people (3.5%). The level of knowledge of female students of the Faculty of Pharmacy and Health Sciences, Abdurrab University is good as many as 175 people (67.3%) and it is hoped that female students can increase their knowledge insights and appropriate and sustainable education so that fear and obstacles to using menstrual cups can be overcome.

**Keywords:** Knowledge, Menstrual Cup, Student

### **Introduction**

In 2020, cervical cancer ranks eighth in the world throughout the world among various other types of cancer and one biggest cause of death in women. Based on this data There are 604,127 people (3.1%) of women in the world diagnosed with cancer cervix (Globocan, 2020). Meanwhile, in Indonesia cervical cancer is prevalent second highest with 36,633 cases or 9.2% of the total cases cancer in Indonesia. Throughout 2021, data on cervical cancer sufferers in Arifin Achmad Regional Hospital in Riau Province reached 105 people (Hidayat. A, 2021). Cervical cancer is caused by the Human Papilloma Virus (HPV) virus predispositions include the behavior of frequently changing sexual partners and unhygienic behavior during

menstruation. In Indonesia, it was found that the main predisposition to cervical cancer is poor quality sanitary napkins (Juliana, 2012).

In Indonesia, several menstrual products are available markets such as sanitary napkins, tampons and menstrual cups. Based on the results Research states that the majority of women in Indonesia using disposable sanitary napkins (UNICEF, 2017). In a day a woman can use three pads and in one can contribute 252 sanitary napkin waste a year. Collected pads The landfill (final disposal site) will release methane gas which is one of the causes of rising temperatures on the earth's surface. Sanitary napkins are made from materials that are classified as high risk waste environmental pollution because the material cannot be recycled. Disintegration of disposable sanitary napkins up to 100% takes 500-800 hours year (Puspitasari, 2019). Apart from the environment, disposable sanitary napkins are also not good for your health. Because disposable sanitary napkins generally contain chemicals such as synthetic polymers, phthalates and chlorine (Rohmatin, 2016). One of other dangerous substances such as dioxin which is produced from the bleaching process on sanitary napkins can trigger vaginal discharge, infection, irritation, etc inflammation if hygiene is not maintained properly. If this product Continuous use over the long term can trigger some diseases such as cancer, irritation, reproductive system disorders, and disorders other health (Putri et al, 2021).

Various facts about sanitary napkins circulating create doubts and concerns for women. The facts about sanitary napkins circulating in Indonesia are: Sanitary napkins do not use the 100% cotton raw material they should is the main ingredient in making sanitary napkins. That's how it should be received serious attention from various groups to reduce the number deaths arising from the use of sanitary napkins containing substances dangerous. Therefore, the emergence of various alternative products has become alternative choices for women (Wijayati et al, 2018). Looking at the losses caused by sanitary napkins, there are various Other alternative products that are not yet well known in Indonesia, namely menstrual cups. This alternative product was created with the intention of reduces various types of bacteria and materials that can damage natural balance due to the very long decomposition process. This tool is rated It is more environmentally friendly because the material is made of silicone and can be used so many times that it can last for 10 years so no giving rise to waste problems.

In addition, menstrual cups can accommodate more blood and minimizes the incidence of irritation and odor compared other products. Even after use, menstrual cup users can clean the menstrual cup with running water and then can reused, so the tools are considered more practical than sanitation tools other menstruation (Beksinska et al, 2015). Many women in developing countries, including Indonesia, still consider menstrual cups taboo and rarely heard of because lack of information and the influence of culture and religion adhered to. Whereas Using a menstrual cup will not damage the hymen or their cervix because when used it does not reach the cervix or cervix. In fact, some women don't even have one hymen since childhood. the hymen can tear just by doing sports or physical activities other than sexual intercourse. Average woman has a vagina with a depth of 7-10 cm while the length of the menstrual cup only 5 cm (Scaccia, 2019) A study conducted on reproductive tract infections found that women who use sanitary napkins have a prevalence bacterial vaginosis is higher compared to women who using a menstrual cup with a percentage of abnormal vaginal discharge symptoms

(39.0%), irritation (24.0%), itching (68.0%), and vaginal infections (13.0%) (Baharuddin et al, 2019).

In research entitled Study of Adaptability and Efficacy of Menstrual Cups in Managing Menstrual Health and Hygiene: A Descriptive Longitudinal Study. The research results showed that 68.9% of participants stated will continue using the menstrual cup. Average satisfaction score the total increased from 5.4 (first cycle) to 12.6 (third cycle). The majority (67%) had no side effects, (10%) experienced irritation and leaks, and (13%) has an unpleasant odor. The conclusion is from research conducted shows that menstrual cups are an alternative better (Singh et al, 2022). Several similar studies can be used as references entitled "An Overview of the Knowledge of Female Students at the Faculty of Public Health Jember University regarding Menstrual Cups in 2022". There are similarities from previous research and what the author will examine is discussing overview of knowledge about menstrual cups but there are differences among others, namely research subjects and sampling techniques The research used was simple random sampling. Based on the results research, the majority of respondents have a good knowledge category regarding menstrual cups (Putri et al, 2021). Based on an initial survey conducted by the author on five female students The results were obtained from the Faculty of Pharmacy and Health Sciences, Abdurrahb University that three respondents did not know the existence of menstrual cups and two Other respondents were aware of the existence of menstrual cups but the information was limited obtained not too many marked with still many answers wrong respondent. Respondents who know about menstrual cups stated that he was afraid when using a menstrual cup because he was afraid it would get stuck in the vagina and eliminates virginity. Based on the results of the interview, all respondents did not use menstrual cups and respondents states that disposable sanitary napkins are a menstrual product they generally use. Research purposes, Knowledge overview of female students at the Faculty of Pharmacy and Health Sciences Abdurrahb University Pekanbaru regarding Menstrual cups in 2023.

## **Literature Review**

Menstrual cups are a sanitary product feminine hygiene that can be used repeatedly in the form of a small cup funnel-shaped, flexible which is usually made of rubber or silicone that is inserted into the vagina to accommodate menstrual fluid (Scaccia, 2019). Menstrual cups have a maximum length of 6 cm diameter 4.2 cm. Generally menstrual cup sizes vary 15 depending on the factory where it is made. Several factories there are two size options, namely: 1. Size Small is intended for women under the age of 30 years who have light menstrual flow, usually experienced by teenagers or unmarried women and give birth. 2. Large size is intended for women over 30 years of age or women who are pregnant and giving birth. However, some factories also provide some a smaller size that can be used for teenagers and beginners (Gallo C et al, 2020). Stages of Use and Disposal When using a menstrual cup, you need to pay attention several things so that the menstrual cup is installed correctly. According to Scaccia (2019), the stages of using a menstrual cup correct: 1. Menstrual cups need to be sterilized first. Before and after the menstrual phase, a menstrual cup is necessary sterilized by boiling for 20 minutes. 2. Wash your hands, before inserting the menstrual cup into the user's vagina you should wash your hands with soap and water then dry them with a tissue to avoid germs. 3.

## ***Insight about Menstrual Cups on Student of the Faculty of Pharmacy and Health Science, Abdurrah University***

Fold the Menstrual cup to ensure the menstrual cup enters the user's vagina need to fold it in half with one hand.

According to Scaccia (2019), the stages of menstrual cup removal the correct one is:

1. Wash your hands first,
2. Find a comfortable position (lying up, squatting, sitting on the toilet, or standing),
3. Place your index finger and thumb into the vagina and touch the stem of the menstrual cup inside the vagina,
4. Pull the handle of the menstrual cup slowly down until the base of the menstrual cup appears slightly.
5. Pinch the base of the menstrual cup and gently pull it down. 6. After the menstrual cup has successfully exited the vagina, clean it menstrual cup with water and dry with agar tissue can be reused. Advantages and disadvantages.

According to Eijk et al (2019), the advantages of menstrual cups compared to other menstrual products, namely:

1. The risk of irritation is very low Menstrual cup users have a risk of infection lower than disposable sanitary napkins because Menstrual cups can help maintain Ph.
2. Holds more blood. The menstrual cup can hold 10-38 ml of blood which should be replaced every 3-4 hours with most use 12 hours depending on the amount of blood coming out and the size of the cup used.
3. Durable and economical. Menstrual cups are made from silicone material so they can be used Lasts up to 10 years and can be used repeatedly so this product is more economical.
4. More hygienic than other products. The material for making menstrual cups is silicone does not cause irritation and itching. Sterilization carried out before and after menstruation proves that this product is more hygienic than sanitary napkins.
5. Various shapes and sizes are available. Varying sizes and shapes of menstrual cups make this easier women in choosing a menstrual cup that is comfortable and reduces the occurrence of dislocations compared to other products like tampons.

Apart from the advantages, menstrual cups also have disadvantages (Pokhrel et al, 2021), Uncomfortable feeling Menstrual cups will cause pain or discomfort uncomfortable due to the wrong position of the menstrual cup it definitely rubs against the vaginal skin.

1. Difficult to use. Using a menstrual cup can be difficult and uncomfortable therefore users should keep trying until get used to using it.
2. Requires special care. Menstrual cups must be sterilized before and after the phase menstruation by boiling for 20 minutes.

## **Research Method**

This research design uses quantitative research with descriptive research design. Quantitative Research is data in the form of numbers (Sugiyono, 2018). Descriptive research is research that directed to describe or explain a situation inside a community or society

(Notoatmodjo, 2018). The aim of this study to find out the Knowledge Description of Female Faculty of Pharmacy Students and Abdurrah University Pekanbaru Health Sciences about Menstrual Cup This research was conducted at the Faculty of Pharmacy and Science Abdurrah University Pekanbaru Health. Population is a generation area consisting of objects/subjects has certain qualities and characteristics determined by researchers to study and then draw conclusions (Sugiyono, 2016). The population used in this research was female students Faculty of Pharmacy and Health Sciences, Abdurrah University Pekanbaru in 2022 with a total of 1302 female students. Sample in research this is the total population consisting of six study programs viz Nursing, Midwifery, Physiotherapy, Anafarma, Technology Medical and Pharmaceutical Laboratories. The technique or sampling used in this research is Cluster random sampling. Research Instrument A research instrument is a tool used to measure observed natural and social phenomena (Sugiyono, 2016).

## **Result/Findings**

Respondents in this research were female students from the Faculty of Pharmacy and Abdurrah University Health Sciences. This research uses data that obtained from the results of distributing questionnaires to 260 respondents questionnaire. Respondent characteristics include age, age of first menstruation (Menarche), study program, menstrual products used, and information menstrual cups.

Table 1 Frequency Distribution of Respondents Based on Age

No	Frequency Characteristics (person)	Percentage (%)
1	17-19 years	128 49.3%
2	20-21 years	119 45.7%
3	22-23 years	13 5%
Total	260	100%

*Source: Research Results, 2023*

Based on the explanation in the table above, it shows that out of 260 Most respondents were aged 17-19 years and over, 128 people with percentage (49.3%).

Table 2 Frequency Distribution of Respondents Based on Age of Menarche

No	Frequency Characteristics (person)	Percentage (%)
1	10-12 Years	93 35.8%
2	13-14 Years	149 57.3%
3	>15 years	18 6.9%
Total	260	100%

*Source: Research Results, 2023*

***Insight about Menstrual Cups on Student of the Faculty of Pharmacy and Health Science, Abdurrah University***

Based on the explanation in the table above, it shows that the age of the respondent. The first time menstruation (menarche) is most often aged 13-14 years as many as 149 people with a percentage of (57.3%).

Table 3 Frequency Distribution of Respondents Based on Study Program

No	Frequency Characteristics (person)	Percentage (%)
1	Anafarma 6	2.3%
2	Pharmacy 127	48.8%
3	Physiotherapy	20 7.7%
4	Obstetrics 46	17.7%
5	Nursing 19	7.3%
6	Technology Medical Laboratory 42	16.2%
Total	260	100%

*Source: Research Results, 2023*

Based on the explanation in the table above, it shows that respondents. The majority were in the Pharmacy study program with a percentage of 127 people (48.8%)

Table 4 Frequency Distribution of Respondents Based on Menstrual Products Used

No	Frequency Characteristics (person)	Percentage (%)
1	pad 260	100%
2	Strap cup 0	0%
3	others 0	0%
Total	260	100%

*Source: Research Results, 2023*

Based on the explanation in the table above, it shows that all respondents using sanitary napkins as the menstrual product used, namely as many as 260 people (100%).

Table 5 Frequency Distribution of Respondents Based on Knowing Menstrual Cups

No	Frequency Characteristics (person)	Percentage (%)
1	Yes 232	89,2%
2	No 28	11,1 %
Total	260	100%

*Source: Research Results, 2023*

Based on the explanation in the table above, it shows that the majority 232 respondents knew about menstrual cups percentage (89.2%).

Table 6 Frequency Distribution of Knowledge Level of Menstrual Cups

No	Frequency Characteristics (person)	Percentage (%)
1	Good 175	67.3%
2	Fair 76	29.2%
3	Less 9	3.5%
Total	260	100%

*Source: Research Results, 2023*

Based on the table above, it shows that respondents with Good knowledge about menstrual cups was 175 people (67.3%), 76 people (29.2%) had sufficient knowledge, while respondents with 9 people (3.5%) lacked knowledge about menstrual cups.

## Discussion

From this research, data was obtained from the Knowledge Overview questionnaire About Menstrual Cups for Female Students of the Faculty of Pharmacy and Health Sciences Abdurrah University Pekanbaru that the majority have knowledge Good 175 people (67.3%), have sufficient knowledge 76 people (29.2%), and have knowledge Less than 9 people (3.5%). The majority of respondents have category of good knowledge regarding menstrual cups. However, there are several questions regarding menstrual cups with a percentage of wrong answers. There are quite a lot of ways to sterilize menstrual cups that have percentages quite a lot of wrong answers. A total of 135 respondents (51.9%) had not Know the phases of menstrual cup sterilization. Menstrual cups need to be washed with water clean and then sterilized by boiling it in hot water for 20 minutes. This is done during the first phase of menstruation and the final phase of menstruation. A study shows that it is an effective way to kill menstrual cup bacteria with water and soap, then boiled in hot water for 5 minute. However, the use of soap is not recommended because it can irritates the vagina.

The research results showed that 132 respondents (50.8%) did not know that installing a menstrual cup cannot only be done by position squat. Installation of the menstrual cup can be done by squatting or sitting in the toilet while opening your legs wide or by standing with support one leg. The most important thing is when using and removing the menstrual cup is that users need to relax. The research results showed that 98 respondents (37.7%) did not know Variations in sizes of menstrual cups. Menstrual cup sizes vary depending on the factory where it is made. Generally long 6 cm with the largest diameter being 4.2 cm. Several factories The product has two size options, small size for women under 30 years of age who have never been pregnant or given birth. Whereas Large size options are intended for women over the age of 30 or women who have been pregnant and given birth. However, some factories provides a smaller size for use by teenagers and beginners. 85 respondents (32.7%) did not know that menstrual cups can only be used for up to 12 hours. The collected blood must be discarded every 4-12 hours depending on menstrual blood flow, type and size cup used. Like tampons, menstrual cups are also used inserted into the vagina, but menstrual blood is collected in The container can hold up to 10-38 mL of blood. Based on the results of the research conducted, it can be seen that knowledge about menstrual cups from 260 respondents regarding Overview Knowledge about Menstrual Cups among Female Students of the Faculty of Pharmacy and

## ***Insight about Menstrual Cups on Student of the Faculty of Pharmacy and Health Science, Abdurrah University***

Science Abdurrah University Pekanbaru's health includes the categories Good, Fair, and Less. The majority of respondents fell into the Good knowledge category with a total of 175 people (67.3%). The research results are in line with research Wunsch N, et al (2022) conducted in India, namely 65.75% of respondents have good knowledge about menstrual cups and their use.

Based on research conducted by Putri, et al (2021) Knowledge Student at the Faculty of Public Health, Jember University about Menstrual cups have good knowledge even though all respondents did not use a menstrual cup, namely 72 people (74.2%). Based on research conducted by Shelby and Puspitasari (2022) female students' knowledge about menstrual cups in the Department of Health, The Airlangga University community is the majority in the knowledge category good, namely 36 people (55.4%). According to the researcher's assumptions, the researcher concluded that the research results Description of Knowledge about Menstrual Cups among Faculty Students Abdurrah University Pekanbaru Pharmacy and Health Sciences in the majority in the Good knowledge category with 175 people (67.3%). This is because Technological advances provide a variety of information has a big influence on knowledge. More and more information The more you enter, the more knowledge you will gain. Somebody who have Good knowledge about menstrual cups will be very influence the behavior of female students in taking action in their efforts increasing knowledge of menstrual cups in the Faculty of Pharmacy and Science Abdurrah University Health. Apart from that, there is a need for ongoing education appropriate and in accordance with the needs of society so that fear and Obstacles to using menstrual cups can be overcome.

### **Conclusion**

Based on the results of research conducted February 2023 to 260 respondents regarding "Illustration of Knowledge about Menstruation cup for female students from the Faculty of Pharmacy and Health Sciences, University Abdurrah Pekanbaru" then it can be concluded that: Knowledge Student at the Faculty of Pharmacy and Health Sciences, Abdurrah University Pekanbaru about Menstrual Cups, namely having good knowledge of 175 people (67.3%), have sufficient knowledge 76 people (29.2%), and have Knowledge Less 9 people (3.5%)

### **Declaration of conflicting interest**

In this research there is no conflict of interest in this work.

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***Insight about Menstrual Cups on Student of the Faculty of Pharmacy and Health Science, Abdurrah University***

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