The effect of coconut water on alleviating menstrual pain (dysmenorrhea) in teenage women

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Abstract

Background: World Health Organization (WHO) in 2018 stated that the number of dysmenorrhea in the world is very large, on average more than 50% of women in each country experience dysmenorrhea. In the United States, it is estimated that almost 90% of women experience dysmenorrhea and 10-15% of them experience dysmenorrhea severe, which causes them to be unable to carry out any activities.

Purpose: To find out "The effect of green coconut water on reducing menstrual pain (dysmenorrhea) in adolescent girls at Junior High School 02 Bengkulu City in 2021.

Method: This research was conducted using the method Quasi Experiment with a plan one group pretest posttest design. Random sampling technique total sampling as many as 28 young women experienced it dysmenorrhea currently. Data analysis consists of univariate, bivariate and multivariate analysis. The sample tests used were Wilcoxon, Mann Whitney and Binary Logistic Regression tests.

Results: The results of this study showed that the average pain dysmenorrhea before and after the coconut water was 5.18 and the average pain after had given coconut water was 2.64. The statistical test results obtained p-value = 0.000, with a mean difference of 2.54 which shows that there is an influence on giving coconut water to young women at Junior High School 02 Bengkulu City in 2021.

Conclusion: It is hoped that the school at Junior High School 02 Bengkulu City can optimize School's Health Clinic program services such as increasing the role of officers to implement canteens or school cooperatives to be able to provide coconut water which has the effect of reducing pain dysmenorrhea in teenage girls.

Keywords: Dysmenorrhea; Coconut Water; Teenage Girl

INTRODUCTION

The number of dysmenorrhea in the world is very large, on average more than 50% of women in each country experience it dysmenorrhea. Each country percentage dysmenorrhea this varies, such as in Sweden around 75% in the United States it is estimated that almost 90% of women experience dysmenorrhea and 10-15% of them experience dysmenorrhea severe, which causes them to be unable to carry out any activities (World Health Organization, 2018).

Percentage dysmenorrhea in Singapore around 10-15%, Malaysia 35-40% and Thailand 65% (Association of Southeast Asian Nations, 2018). In Indonesia alone, the incidence of menstrual pain in women aged 13-19 years is 64.25%, consisting of 54.89% primary dysmenorrhea and 9.36% secondary dysmenorrhoea, menstrual pain (dysmenorrhea) causing 14% of adolescent patients to often not be able to participate in learning activities either at school or in college (Nuraeni, & Nurholipah, 2021).

Risk factors for dysmenorrhea include early menarche, family history of dysmenorrhea complaints, abnormal Body Mass Index, habit of
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eating fast food, duration of bleeding during menstruation, exposure to cigarette smoke, coffee consumption, and alexithymia (Larasati & Alatas, 2016). Other risk factors that influence dysmenorrhea is the menstrual cycle and the length of menstruation (Pratiwi, 2017).

Management of menstrual pain (dysmenorrhea) can be done with pharmacological or non-pharmacological therapy. The first pharmacological effort that can be taken is to administer analgesic drugs which function as pain relievers. Non-pharmacological therapy can be done as an effort to treat it without using chemical drugs. One of the non-pharmacological treatments for pain is green coconut water (Rismaya, Rosmiyati, & Mariza, 2020).

Coconut water, compared to other types of coconut, contains the highest amount of tannin or antidote (anti-toxin) (Nurqalbi, & Lolo, 2019). Coconut water can reduce the level of menstrual pain in teenagers who are experiencing menstrual pain. The chemical content in coconut water is an anti-inflammatory substance that helps relieve pain due to menstrual cramps (Pattiiha, Novelia, & Suciawati, 2021).

Dysmenorrhea has an adverse impact on teenagers’ lives, dysmenorrhea can result in disrupted activities, lower academic achievement, disrupt performance and sleep quality, have a negative impact on mood, and cause anxiety and depression. Apart from that, young women experience it dysmenorrhoea will feel limited in carrying out activities, especially learning activities at school (Bernardi, Lazzeri, Perelli, Reis, & Petraglia, 2017). Based on preliminary data obtained from the Bengkulu City National Education Service, it was found that 350 female students at Junior High School 02 Bengkulu City in grades VIII and IX experienced dysmenorrhea as many as 26 cases (12%). From the data, there were 26 people who came to the School’s Health Clinic and were only given anti-pain medication and given eucalyptus oil to the lower abdomen to relieve pain. Female students who experience dysmenorrhea are students who lack knowledge in dealing with dysmenorrhea.

RESEARCH METHODS

The research design used is a quasi-experimental research design one group pretest and posttest. Is design like an experiment by doing pretest before giving treatment and doing posttest after giving treatment. This research design has one experimental group without comparison and non-random sampling. Sampling using techniques purposive sampling. The research instrument uses a pain scale numeric rating scale (NRS), with a scale of 0-10 (Pattiiha, Novelia, and Suciawati, 2021). The research was carried out from November to December 2021. The place of this research was Junior High School 02 Bengkulu City.

The population in this study were female students from class VII to IX at Junior High School 02 Bengkulu City, totaling 497 female students, there were female students from class VII and class VIII totaling 350 female students, there were 28 female students who experienced menstrual pain (dysmenorrhea). The method used in taking this sample is by using total sampling. Variable dependent is coconut water, while variable independent is age menarche and old menstruation.

250ml of green coconut water is given, taken twice a day, 1 glass and consumed in the morning and evening, for 3 consecutive days starting on the first day of menstruation. And to see the effect of giving green coconut water on menstrual pain (dysmenorrhea) by asking participant to; contact during menstruation, fill out the NRS checklist, measure the pain scale on participant and after the third day of drinking green coconut water, participant are asked to fill out the NRS again.

Univariate analysis uses frequency distribution, bivariate uses wilcoxon, and Mann Whitney test which is used to see the relationship between age variables menarche and old menstruation with variables dysmenorrhea. This research has been declared ethically appropriate by the Bengkulu Ministry of Health Polytechnic with number KEPK.M/205/11/2021.

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RESEARCH RESULTS

Table 1. Frequency Distribution of Participant (N=28)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Menarche (n%)</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;12 years</td>
<td>13/46.4</td>
</tr>
<tr>
<td>12-14 years old</td>
<td>15/53.6</td>
</tr>
<tr>
<td><strong>Length of Menstruation (n%)</strong></td>
<td></td>
</tr>
<tr>
<td>&lt;3 days or &gt;7 days</td>
<td>12/42.9</td>
</tr>
<tr>
<td>3-7 days</td>
<td>16/57.1</td>
</tr>
</tbody>
</table>

Based on table 1, it can be seen that of the 28 young women, it was found that almost half of the young women were aging menarche 12-14 years, namely 15 (53.6%) and for a long time menarche mostly 3-7 days as many as 16 (57.1%).

Table 2. Average of menstrual pain score (N=28)

<table>
<thead>
<tr>
<th>Variable Changes in Menstrual Pain</th>
<th>Pain Scale</th>
<th>Mean</th>
<th>Different Mean</th>
<th>Standard Deviation</th>
<th>Z</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before Intervention</td>
<td>4</td>
<td>6</td>
<td>5.18</td>
<td>0.8631</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.54</td>
<td></td>
<td>-4.701</td>
<td>0.000</td>
</tr>
<tr>
<td>After Intervention</td>
<td>2</td>
<td>6</td>
<td>2.64</td>
<td>1.283</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Wilcoxon test*

Based on table 2, it is known that the average value of pain intensity before had given coconut water to reduce menstrual pain (dysmenorrhea) 5.18 and the average value of pain intensity after had given coconut water was 2.64, where there was a decrease in pain as evidenced by 2.54. It was found that there was an effect of coconut water on menstrual pain (dysmenorrhea) among young women at Junior High School 02 Bengkulu City in 2021, proven by statistical test results p-value (2-tailed) value 0.000 < 0.05.

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Table 3. Normality Test (N=28)

<table>
<thead>
<tr>
<th>Change Variables</th>
<th>Pain Changes</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
</tr>
<tr>
<td>Pain score before intervention</td>
<td>0.759</td>
<td>28</td>
</tr>
<tr>
<td>Pain score After intervention</td>
<td>0.931</td>
<td>28</td>
</tr>
</tbody>
</table>

Based on table 3 above using the normality test `Shapiro-Wilk` that sig. < 0.05 which means the data is not normally distributed so this bivariate analysis uses the Wilcoxon test. This bivariate analysis was also carried out to determine the influence of variables outside of age menarche and old menstruation with the incident dysmenorrhea among young women at Junior High School 02 Bengkulu City in 2021. The analysis method uses test analysis "Mann whitney". The results of the analysis can be seen from the table below:

Table 4. The Influence of Age of Menarche and Length of Menstruation on Menstrual Pain (Dysmenorrhea)

<table>
<thead>
<tr>
<th>External Variables</th>
<th>Mean Rank</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age Menarche</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;12 years</td>
<td>17,88</td>
<td>0.035</td>
</tr>
<tr>
<td>12-14 years old</td>
<td>11,57</td>
<td></td>
</tr>
<tr>
<td><strong>Length of Menstruation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;3 or &gt;7 days</td>
<td>18,46</td>
<td>0.022</td>
</tr>
<tr>
<td>3-7 days</td>
<td>11,53</td>
<td></td>
</tr>
</tbody>
</table>

*Mann Whitney

Based on table 4 above, it is found that there is an influence between the age variables menarche with dysmenorrhea proven by the results of p-value 0.035 < 0.05. Likewise with the old variables menstruation there is an influence on dysmenorrhea proven by the results p-value 0.022 < 0.05.
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Table 5. Linear Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>95% Confidence Interval B</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
</tr>
<tr>
<td>Coconut Water</td>
<td>2.536</td>
<td>3.051</td>
<td>2.020</td>
</tr>
<tr>
<td>Menarche Age</td>
<td>0.807</td>
<td>1.329</td>
<td>284</td>
</tr>
<tr>
<td>Length of Menstruation</td>
<td>0.807</td>
<td>1.326</td>
<td>289</td>
</tr>
</tbody>
</table>

Based on table 5 above, the statistical results of the variables coconut water, age are known menarche and old menstruation everything is related, but the variable that is most related is coconut water as proven by the results p-value 0.000 < 0.05.

DISCUSSION

Average of menstrual pain score

Pain is an unpleasant sensory and emotional experience related to actual and potential tissue damage localized to a part of the body, often described in terms of destructive processes, tissue like pricking, burning heat, twisting like emotions, feelings of fear, nausea and dread. (Judha, & Sudarti 2014). Pain is a condition in the form of an unpleasant feeling, is very subjective and the feeling of pain in each person varies in terms or levels (Jayanti, Puspitasari, & Arisanti, 2017).

Based on table 2, it shows that the average value of pain intensity before had given coconut water was 5.18 which was classified as moderate pain, characterized by the young women hissing, grinning, still had able to show the location of the pain and still had able to describe the pain and still had able to follow commands well. A total of 28 young women were in the moderate pain category, including 8 people on scale 4 (28.5%), 7 people on scale 5 (17.8%) and 13 people on scale 6 (46.4%).

Based on table 2, after had given coconut water, the average pain intensity for young women was 2.64, which was classified as mild pain, indicating that the participant were still able to communicate well. A total of 27 young women (96.4%) of 28 young girls did not experience a decrease in the pain scale or remained in the same category and scale when the pretest was performed.

This difference in pain is influenced by several factors such as age menarche and old menarche. Age menarche can be said to be normal when at the age of 12-14 years. Age menarche who are too young (<12 years), there is a relationship between age menarche to the incident dysmenorrhea primary due to time menarche occurs earlier than normal, so the reproductive organs are not ready to undergo changes and there is still narrowing of the cervix, so there will be pain during menstruation (Susanti, Rusminah, & Sari, 2016).

Old menstruation can be influenced by many things, such as the food consumed and physical activity, hormones and enzymes in the body, vascular problems and genetic factors (Basith, Agustina, & Diani, 2017). The classification of menstrual duration is divided into normal and abnormal. Normal if the duration of menstruation is 3-7 days and it is said to be abnormal if it is beyond that. The longer menstruation occurs, the more frequently the uterus contracts, the more prostaglandins are released as a result. As a result of excessive prostaglandins, pain can occur menstruation (Gustina, Wijayanti, & Raharjo, 2016).

The condition of a person's body will not be the same as another, which is caused by differences in endorphin levels. Endorphins function to regulate various physiological functions such as pain.
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transmission, emotions, appetite control and hormone secretion. The difference between high endorphin levels will cause little pain and low endorphin levels will cause excessive pain. Apart from that, prostaglandins also stimulate pain nerves in the uterus, thereby increasing the intensity of pain.

The results of this study are in accordance with research that has been conducted previously regarding "the effect of green coconut water on reducing pain dysmenorrhea in teenagers" in Ampere hamlet, Teluti District, Central Maluku District, Maluku Province. This was explained by looking at the behavioral responses of 30 teenagers who were given coconut water therapy and the posttest results showed that 16 participant (53.3%) had no pain. The results of this research are proven by p-value 0.000 < 0.05, which means there is a difference between giving coconut water for the pretest and posttest, so it can be concluded that there is an effect of had coconut water against dysmenorrhea pain (Patttha, Novellia, & Sucilawati, 2021).

This research is in line with research conducted at the Raudhatul Mutta'alimin Tasikmalaya Islamic Boarding School regarding "the effect of consuming coconut water on reducing menstrual pain" where from the results of statistical tests there was a significant difference in menstrual pain before and after had given coconut water therapy with proven-thanks 0.000 < 0.05. Which means there is an effect of giving coconut water on reducing menstrual pain in young women (Realita, Dewi, & Susilowati, 2021).

From the description above, researchers are of the opinion that the scale or level, the feeling of pain felt by each person is different. Only that person can indicate the scale or level of pain they are experiencing.

The effectiveness of coconut water in alleviating menstrual pain (dysmenorrhea)

To determine the effect of coconut water on changes in menstrual pain scale (dysmenorrhea), researchers use statistical Wilcoxon tests provided that the data is not normally distributed. After analyzing, based on the research results, it can be seen that the average scale of pain during menstruation (dysmenorrhea) before doing yoga was 5.18, the average scale dysmenorrhea after had given coconut water was 2.64, the average difference before and after the intervention was 2.54 and the p-value obtained is 0.000 with a significance level of α = 0.05. Because of p-value 0.000 < 0.05 then "Hypothesis is accepted".

This states that there is a significant difference between had given coconut water and changes in the pain scale dysmenorrhea. Based on the category, a pain scale is obtained dysmenorrhea before had given coconut water, 28 young women experienced moderate pain. Then after a meaningful change occurs. The number of young women experiencing moderate pain changed to 21 young women experiencing mild pain and 7 young women experiencing moderate pain.

The results of research conducted on level I and II midwifery students at Malahayati University showed that there was a significant difference in reducing the level of dysmenorrhea pain before and after giving coconut water, because coconut water is very effective in reducing dysmenorrhea. Participant who had undergone treatment found a decrease in menstrual pain after had given coconut water, this is because during menstruation the body releases fluid and blood. The folic acid contained in it is also useful for replacing lost blood. With sufficient blood production, blood circulation will improve. Smooth blood circulation will fulfill cells' needs for oxygen and nutrients. With this condition, the body will be more resistant to the painful sensations caused during menstruation (Rismaya, Rosmiyati, & Mariza, 2020).

This happens because pain is subjective and only someone who experiences this condition can describe the amount of pain they feel. So it will have an effect on reducing the pain intensity score for each respondent (Jayanti, Puspitasesari, & Arisanti, 2017).

In line with research conducted in Tanggerang, it is stated that giving coconut water can reduce the level of menstrual pain in women who are experiencing menstrual pain. This is because coconut water has high nutritional content and various health benefits (Nuryanih, & Suhatika, 2020).

The results of this study are in line with research in Srinanti Village, Gunung Gajah District, Regency everyone, Regarding "efforts to reduce dysmenorrhea in young women by consuming young coconut water in Srinanti village, Gunung Gajah sub-district, Lahat district," a negative rank was obtained, namely 30, which means that all participant
experienced a decrease in the pain scale after consuming coconut water for 3 days. From the statistical test results obtained $p$-value $0.000 < 0.05$, which means that there is a significant influence on the consumption of young coconut water (Widowati, Eltamira, & Choirunissa, 2021). Likewise, research conducted at Rusunawa Putri Muhammadiyah University Semarang stated that menstrual pain among young women at Rusunawa Putri Muhammadiyah Semarang before and after had given young coconut water with $p$-value $= 0.000 (<0.005)$ (Amiritha, Pawestri, & Samiasih, 2017).

Other research that supports this research is research entitled giving coconut water can alleviating dysmenorrhea in teenagers at Malahayati University as many as 30 people, divided into 2 groups, the average pain felt by participant before had given treatment was 8.40 and the turn was 2, 73 after had given coconut water treatment, while for the control group the average pain was 8.67 to 4.00. The results of data analysis use tests Independent T-Test The value obtained was (0.006) $< 0.05$, Ha was accepted and Ho was rejected, which means that there was an influence between giving coconut water on alleviating dysmenorrhea pain in female midwifery students at Malahayati University (Rismaya, Rosmiyati, & Mariza, 2020).

Based on the description above, researchers assume that giving coconut water is a technique that can be used to reduce dysmenorrhea. In this study most of the scales dysmenorrhea participant after had given coconut water experienced changes, namely in the form of a decrease. From the results of research conducted by researchers with theoretical concepts and the results of existing related research, it can be defined that there is a significant influence between giving coconut water on changes in the scale dysmenorrhea. So coconut water can be applied as an alternative that can be used to treat dysmenorrhea.

The most influential variable of Coconut Water

Based on table 4 above, it is found that there are variables that influence the requirements for carrying out further tests in multivariate analysis, due to all the $p$-value smaller than 0.25. This means statistically age menarche with $p$-value (0.035) means $p$-value $<0.05$. Age menarche those who are too young ($\leq 12$ years) where the reproductive organs have not developed optimally and there is still narrowing of the cervix, will experience pain during menstruation, because the female reproductive organs are not yet functioning optimally (Rosenthal, 2013). Age menarche varies by individual and region of residence, but age menarche can be said to be normal when at the age of 12-14 years. There is a relationship between age menarche to the incident dysmenorrhea primary due to time menarche occurs earlier than normal, so the reproductive organs are not ready to undergo changes and there is still narrowing of the cervix, so there will be pain during menstruation (Susanti, Rusminah, & Sari, 2016).

Menarche earlier, the reproductive organs are not functioning optimally and are not ready to face the changes that arise dysmenorrhea (Kristianingsih, 2016). Age menarche going too fast for some young women can cause anxiety because they are not mentally ready. Teenage girls who menarche at an easier age are at risk of experiencing dysmenorrhea higher than that of teenagers menarche at normal age (Nurwana, Sabili, & Fachlevy, 2017).

Age menarche early onset increases the risk of occurrence dysmenorrhoea. Women who have ages menarche those at risk need to pay more attention to their health problems, especially incidents dysmenorrhea. The results of this research are in line with research entitled "Incidence of Dysmenorrhea Based on Age of Menarche and Mother's History of Dysmenorrhea in Class X Adolescent Girls. It is known that of the 26 participant who experienced menarche experienced early dysmenorrhea as many as 24 (92.3%) participant while the rest experienced dysmenorrhea with time menarche normal. From the results of the chi square statistical test, the $p$ value $= 0.009 < \alpha = (0.05)$ (Riyanti & Widia, 2019).

In line with research by female students at Junior High School 02 Sawan, where the highest incidence of dysmenorrhea occurred at age menarche early namely as many as 21 people while age menarche normally 18 people. Correlation analysis results product moment, shows a value of $p=0.005$, then there is a relationship between age menarche with dysmenorrhea (Savitri, Citrawathi, & Dewi, 2019).

Based on table 4 above, it is found that there are variables that influence the requirements for carrying out

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out further tests in multivariate analysis, due to all
the values p-value smaller than 0.25. It means long
time menstruation with p-value (0.022), which means
that means p-value < 0.05.

Old menstruation can be influenced by many
things, such as the food consumed and physical
activity, hormones and enzymes in the body,
vascular problems and genetic factors (Basith,
Agustina, & Diani, 2017). The classification of
menstrual length is divided into normal and
abnormal. It is normal if the length of menstruation is
3-7 days and is said to be abnormal if it is beyond
that. Long menstruation more than normal will cause
more frequent uterine contractions and more
prostaglandins are released (Sirait & Besi, 2015).
Excessive production of prostaglandins is what
causes pain while continuous uterine contractions
cause the blood supply to the uterus to stop and
there is dysmenorrhea (Proverawati & Misaroh,
2019).

The results of research conducted on young
women at Senior Vocational School 10 in Medan
showed that the participant who experienced the
most dysmenorrhea were those who experienced a
menstrual period of > 7 days (87.2%) with a value of
p-value amounted to 0.046, so it was concluded that
there was a relationship between the length of
menstruation and the incidence of dysmenorrhea. In
this study, it was also stated that menstruation
duration > 7 days was 1.2 times more likely to
experience dysmenorrhoea compared to young
women whose menstruation period was ≤ 7 days
(Ancient, & Sarumpaet, 2013).

Based on table 5, it is known that there are
variables for coconut water, age menarche, and old
menstruation everything has an influence on
dysmenorrhea, where for the variable coconut water
the value is proven p-value (0.000), age menarche p-
value (0.033), and old menstruation with p-value
(0.033), which all variables have an effect on
dysmenorrhea where the coconut water variable is
the most influential among other variables as proven
by the result p-value 0.000 < 0.05.

This is proven by previous research which shows
that giving young coconut water can reduce the level
of menstrual pain in teenagers who are experiencing
menstrual pain. This is because young coconut
water has a lot of high nutritional content for various
health (Pattiiha, Novelia, & Suciawati, 2021). In line
with other research, it is stated that reducing
menstrual pain can be done by administering
coconut water (Sumino, Nursanti, & Trisnawati,
2012).

This is the same as research conducted at
Rusunawa Putri, Muhamadiyah University,
Semarang, reducing pain dysmenorrhea for female
students in the nursing science study program with
p-value 0.000 (0.005) and also research on D IV Midwife Educator Study Program students at
Aisyiyah University, Yogyakarta, stated a decrease
in pain dysmenorrhea with a significant value of
0.001 (0.001 < 0.05, statistical test results show that
H0 is rejected and Ha is accepted (Amirtha,
Pawestri, & Samiash, 2017; Khodijah, Herfanda, &
Putri, 2017).

From the discussion above, it can be concluded
that all variables have an influence on dysmenorrhea
age menarche, old menstruation and coconut water,
but taking into account the younger age of the
participant, it turns out that this doesn't have much of
an effect because the reproductive system has not
been fully used so there is still narrowing which
results in dysmenorrhea, as well as the old one
menstruation that age is more. It is also easy to
influence because the reproductive organs are not
yet working perfectly, however, of the three
variables, coconut water is the variable that has the
most influence on dysmenorrhea which is proven by
the results p-value 0.000 < 0.05.

CONCLUSION

There is an effect of coconut water on menstrual
pain (dysmenorrhea) among young women at Junior
High School 02 Bengkulu City. Obtained statistical
test results p-value (2-tailed) has a value of 0.000 <
0.05. There is an influence between the age variable
menarche and old menstruation with dysmenorrhea
proven by the results t p-value 0.035 < 0.05.
Likewise with the old variables menstruation there is
an influence on dysmenorrhea proven by the results
p-value 0.022 < 0.05.

Statistically, the variables are coconut water, age
menarche and old menstruation. The most related
variable is coconut water as evidenced by the results
p-value 0.000 < 0.05.

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The effect of coconut water on alleviating menstrual pain (dysmenorrhea) in teenage women

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SUGGESTION

It is hoped that the school at Junior High School 02 Bengkulu City can optimize School's Health Clinic program services such as increasing the role of officers to implement the canteen or school cooperatives to be able to provide coconut water which can be used as an alternative to reduce pain dysmenorrhea in teenage girls.

For future researchers, conducting similar research can extend the research time so that menstrual pain intensity can be measured/dysmenorrhea at least 3 menstrual cycles, to get better results.

It is hoped that students from the Bengkulu Ministry of Health Polytechnic, Department of Midwifery, can use the results of this research as reference material in treating menstrual pain/dysmenorrhea for yourself and others.

REFERENCES


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