PREVALENCE AND MANAGEMENT OF DYSMENORRHEA IN ADOLESCENT

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Abstract

Most adolescents who experience pain during menstruation make improper management such as consuming medicine from small stalls. It also lacks the use of non-pharmacological techniques to deal with the menstrual pain. This study aimed to determine the prevalence and treatment of dysmenorrhea in adolescent girls. The population in this study was year 7 and 8 students, totaling 127 students, the sample size used *total sampling*. Data collection used a questionnaire that has been tested for validity and reliability. Data analysis used univariate with distribution and frequency. The results showed that the highest level of menstrual pain was mild pain (82.7%), moderate pain (13.4%) and severe pain (3.9%). Handling dysmenorrhea with pharmacology mostly uses medicine from small stalls (69.7%) and the highest non-pharmacological treatment is drinking water (85.8%). It is expected that the school will work together with the Puskesmas to provid from small stalls, but they must be examined by health workers, immediately.
Keywords : Dysmenorrhea, actions, Adolescents

INTRODUCTION

One of the efforts in improving adolescent reproductive health is carried out through health education related to providing information about reproductive care and reproductive health disorders. Adolescents' reproductive health includes mental health, physical and social and not only free from disease or disability. One of the reproductive health disorders in adolescents is menstrual disorders (Mulyawan, 2015). Problems during menstruation that often occur in adolescents is dysmenorrhea (Prawihardjo, 2011). According to Murtiningsih (2015) the impact of dysmenorrhea on school girls causes disruption to daily activities, and most students do not go to school, resulting in a decrease in their quality of life. Students who experience dysmenorrhea would decrease concentration and motivation in study due to dysmenorrhea experienced.

Based on the population census in 2015, the population in Indonesia amounted that 237,641,326 people and 63.4 million (3.27%) were teenagers, at this time most teenage girls had menstruated which showed that their reproductive organs were functioning properly (Prawirohardjo, 2011). According to Harry (2016) during menstruation all women experience physical and emotional changes that are influenced by reproductive hormones with normal blood output every day around 35 ml. The duration of menstrual periods is between 3-7 days. According to Manuaba (2009) the natural process experienced by every woman is ovulation (egg release occurs), during

ovulation, the estrogen hormone is increased which causes the lining of the uterus to grow and develop.

According to the *World Health Organization* (WHO) (2012) adolescents who experience menstrual pain is quite large at around 50%. In adolescents aged 10 to 19 years, the pain during menstruation categories of mild pain (19.3%), moderate (20.2%) and severe (60.3%) (Surmiasih, 2018). Based on the *National Health and Nutrition Examination Survey* (NHANES) (2015) the age of *menarche* in adolescents in Indonesia is 9 to 14 years with an average of 12 years and adolescents who experience dysmenorrhea around 43% to 93%, these teens experience mild dysmenorrhea 74 to 80%, the laparoscopic test found that 67% of adolescent girls experience endometriosis (Hestiantoro et al, 2012). There is severe menstrual pain (dysmenorrhea) experienced by adolescents every month if not treated properly, and it will cause worsening conditions including increased bleeding and pain (Februaryanti, 2017).

Management of dysmenorrhea according to MIMS (2008) in Djuanda (2008) includes non-pharmacological and pharmacological methods. Non-methods pharmacological includes compress the lower abdomen, drink lots of water, exercise regularly, consume foods that contain lots of iron, and adequate rest. Pharmacological methods, namely administration of analgesic drugs, administration of antispasmodics, and supplementation. According to Prawirohardjo (2009), handling dysmenorrhea women would choose pharmacological, non-pharmacological methods, and consultation with medical personnel. Based on the results of Kusmiyati's research (2016) from 33 respondents found only 2 respondents (6.06%) handled dysmenorrhea pharmacological and 31 respondents (93.94) respondents did non-pharmacological treatment. These teens choose different ways to reduce pain - varies according to perceived comfort.

Based on the results of preliminary studies at SMPN 1 Tarogong Garut, out of 10 students said that almost all of them experienced menstrual pain. 8 students revealed that they did not do any treatments when experiencing menstrual pain in the range of mild pain, they assumed that the pain was a natural thing so that it did not need to be consulted to health workers. Only 2 students who manage pain during menstruation, 1 student in the range of pain is taking medicine from small stalls to relieve pain, if the drug is consumed continuously will cause the risk of kidney disease, and heart. Another student used warm water compresses in the lower abdominal area to handle the mild pain. Other information was obtained from the UKS' teacher that students who

had dysmenorrhea usually requested pain killers but it was not available, so the student asked for permission to go home and could not continue her activities at school due to menstrual pain.

Based on the attendance report, 10-12 students were absent because of menstrual pain, , do not attend sports class (15 students) and do not attend the examination (8 students). Interventions to deal with the pain that conducted by some students were non-pharmacological methods by compressing the stomach with warm water, drinking water, getting enough sleep, and consuming foods containing iron, such as spinach, eggs, potatoes. However, there are a small number of students who use pharmacology by buying medicine from stores, taking herbal medicines, and taking medicines from doctors, and there are students who experience moderate pain but do non-pharmacological treatment. The purpose of this study was to obtain the prevalence and actions to deal with dysmenorrhoea in young women.

METHODS

The research method useD *quantitative descriptive*. This method was chosen because this study described the prevalence and actions to deal with dysmenorrhoea in adolescent girls. The study was conducted at SMPN 1 Tarogong Garut in June-July 2018. The population in this study were 7th and 8th grade teenage girls. The technique sampling used a total *sampling* of 127 young women. The research instrument used a pain assessment questionnaire which is the *Numeric Rating Scale* (NRS). A numerical scale of 0-10 is 0 painless, 1-3 mild pain, 4-6 moderate mild pain, 7-9 bearable severe pain , and 10 unbearable severe pain. The questionnaire of management dysmenorrhea contained 13 questions. Respondents' answers are categorized into 2 types of scores, a score of 0 is not done and a score of 1 is done. Data analysis used univariate form of frequency distribution. The results of the analysis are presented in tabular form and categorized as yes and no . This study was approved by the Research Ethics Committee of Padjadjaran University with number 662 / UN6.KEP / EC / 2019.

RESULTS

Table 1 Characteristics of Respondents (n = 127)

Characteristics	Frequency (f)	Percentage (%)
age		
- 8-11 years old	1	8
- 12-15 years of	126	99.2
menarche		
- 10 years old	2	1.6

- 11-13 years old	104	81.9
- 14-16 years	21	16.5
Length of Menstrual Pain		
- 1	17	13.4
- day>1 day	110	86.6
Duration of Menstruation		
- 4 - 7 days	117	92.1
- > 7 days	10	7.9

Table 1 shows that almost all respondents were 12-15 years old, menarche 11-13 years old, menstrual pain> 1 day and menstrual time 4-7 days.

Table 2 Assessment of Pain Levels (n = 127)

Assessment ofPain	Frequency (f)	Percentage (%)
Mild	105	82.7
Moderate	17	13.4
Persistent Severe Pain	5	3.9

Table 2 shows that most respondents experienced mild category pain.

Table 3 Actions to deal with *dysmenorrhoea* (N = 127)

Actions	Yes		No	
	(f)	(%)	(f)	(%)
Pharmacology				
- Taking medicine from the drug store	88	69.3	39	30.7
- Medicine from Doctors	62	48.8	65	51.2
- Hormone therapy	50	39.4	70	60.6
- Consult with medical personnel	49	38.6	78	61.4
Non-Pharmacological				
- Compress stomach with warm water	104	81.9	23	18.9
- Drinking water	109	85.8	18	14.2
- Doing exercise	36	28.6	91	71.7
- Eating foods containing iron and vitamins	114	89.8	13	10.2
- Consuming calcium: milk				
- Getting enough sleep	102	80.3	25	19.7
- Doing other activities such as gymnastics	98	77.2	29	22.8
	81	63.8	46	36.2
- Sleeping elevating the hips from the shoulders	89	70.1	38	29.9

- Using herbal treatments	97	76.4	30	23.6

Table 3 shows the majority of dysmenorrhoea treatments using pharmacology with drugs stalls and non pharmacology with sports.

DISCUSSION

The prevalence of dysmenorrhea in SMP 1 Tarogong Garut is mostly mild pain, which does not interfere with daily activities, so that students who experience mild pain feel pain but do not interfere with their activities. However, many respondents who experience menstrual pain are not treated because it is considered natural, many students who experience mild menstrual pain do many non-pharmacological treatments such as compressing the stomach with warm water, drinking water, consuming milk, consuming foods containing iron such as spinach, eggs and potatoes. If the mild menstrual pain does not solve well, students risk moderate menstrual pain.

Based on the research results of pain being experienced by 17 female students, respondents who were experiencing pain, they asked for permission to rest at home, because they were not able to deal with the pain, sometimes they were crying due to menstrual pain, and felt that they needed treatment from a doctor. Severe pain endured by 5 female students, severe pain felt in the lower abdominal area sometimes reaching the hips, back and thighs. According to Frintz (2010) students who experience severe pain sometimes experience cramps in the lower abdominal area, weakness, nausea, no appetite, unable to move, and cannot concentrate on learning. Based on the results, pharmacological treatments that are safe for consumption such as diclofenac, ibuprofen, ketoprofen, mefenamic acid and Naproxen. These drugs contain or work as pKa 2-5 which can be absorbed in the stomach and small intestine and plasma protein (albumin). It works to inhibit COX-1 and COX-2 isoenzymes. Cyclooxygenase enzymes play a role in the formation of prostaglandins and thromboxane from arachidonic acid to inhibit isoenzymes, when prostaglandins occur in the form of inflammatory reactions and pain. Side effects of the drug on the digestive tract such as (nausea, vomiting, diarrhea, gastric bleeding, and dyspepsia) and kidney disorders (salt, fluid and hypertension retention), therefore handling with these drugs must be monitored to avoid excessive consumption or drug purchased without a prescription (Rossi, 2006).

Handling of dysmenorrhoea using herbal medicines is used by almost all students because they get information from their families. Most students use drugs that are sold freely in stalls, the student reasoned stall medicines are cheap and quickly relieve pain. But they do not pay attention to the effects of frequent use of these drugs can cause damage to the liver, kidneys and so forth. Side effects of the use of these drugs on the stomach such as nausea, dizziness and drowsiness (Rustam, 2014).

Another indicator of pharmacological treatment that is given pain killers by a doctor a small proportion of respondents doing this handler argued that she could not deal with the pain so she went to the doctor for treatment. Nearly half of the treatment of dysmenorrhoea is consulted to medical personnel who aim to anticipate the handling of inappropriate. Handling of non pharmacological stomach compresses with warm water is almost entirely carried out by respondents. In line with Dahlan's statement (2016) the method of warm compresses can be used because it cause physiological effects, there is a feeling of warmth in the stomach causing an increase in psychological relaxation that is feeling of comfort. Meanwhile, according to Rahayuningrum (2016) pain impulses from the cortex can be modified and regulated so that it can inhibit pain sensations and warm compresses stimulate non-nociceptive nerve fibers. The function of nerve fibers inhibits the transmission of pain that transmit to the brain. The response of the body when handling warm compresses will be the occurrence of heat transfer (conduction) from bottles of warm water to the stomach to expedite blood circulation and reduce muscle tension. Drinking 8 glasses of water a day is mostly done by students because it is easy to do anywhere. According to Kurnia et al., (2016) this treatment can reduce uterine contractions, improve blood circulation and reduce cramps in the lower abdomen.The purpose of drinking 8 glasses of water a day is to have a good blood circulation and menstrual blood flow.

Pain management by exercising is only done by a small number of respondents whereas according to Fajaryati (2012) the incidence of dysmenorrhea can increase due to lack of exercise, due to the blood vessels being unable to deliver oxygen so that vasoconstriction occurs in the reproductive organs which causes pain. Doing regular exercise it is available oxygen is approximately 2 times the normal per minute and oxygen is channeled to blood vessels undergoing vasoconstriction, this can be a cause of decreased menstrual pain. The highest action was consuming foods that contain iron such as spinach, eggs, potatoes during menstruation. The spinach has high iron, so that the process of formation of red blood cells that can carry oxygen

throughout the body. Eggs are useful to improve the brain function and the immune system. Potatoes have good benefits for the body which helps to be relaxing and increase Hb levels. According to Maula (2017), lack of iron intake causes anemia. Anemia is one of the factors that can cause low hemoglobin level, and impact to the level of oxygen that will be transported throughout the body so that the reproductive organs experience lack of oxygen which is one cause pain during menstruation.

Consuming calcium like milk is done by most students. According to Maula (2017) calcium is a substance needed by muscle contraction and a small portion of calcium in tissue plays a role in controlling the heart's work including skeletal muscle and nerve excitability. If the muscle lacks calcium, the muscles become cramped and painful. Adequate sleep during menstrual pain is the most action that is chosen by students to deal with menstrual pain. Lack of sleep can cause fatigue and arise more sensitive to pain. So that this treatment is best done in handling mild pain to relieve menstrual pain.

Other handling with exercise is done by most respondents. Respondents said they were comfortable with doing exercise during menstruation. According to Kurnia (2015) when doing exercise the body will get endorphin hormone, the hormone functions as a natural sedative that can be produced by the brain to produce a sense of comfort, besides that at endorphin levels can reduce pain when contracting. Menstrual pain can be ignored if students do exercise, massage and other activities. Overcoming pain with distraction techniques will inhibit pain impulses to the brain. Massage can result in increased blood flow, and produce more red blood cells that carry oxygen to the muscles, as well as the urge to produce endorphins to eliminate natural pain (Kusmiyati, 2016). Another treatment is to sleep or lie down leaving the hip position from the shoulder position carried out by a small number of students. The sleep position is useful to eliminate cramps that will disappear and provide comfort in sleep (relax).

Pharmacological medicines contain chemicals that would damage organs such as kidneys, liver, therefore there are alternative treatments derived from herbs such as aloe vera, ginger, turmeric and sour. The processing method varies according to the plant species. These plants contain antioxidants that are useful for strengthening the immune system because of the presence of vitamin C which can strengthen the immune system. Turmeric contains vitamin B1 for the formation of red blood cells. Acids also contain amino acids which help as anti-inflammatory and increase endurance, and can be a pain reliever during menstruation (Suciani, 2014).

CONCLUSIONS

Almost all respondents experienced mild pain, they mostly did the non-pharmacological method to deal dysmenorrhea. It is expected that the school would work together with the Puskesmas to provide health education to students about appropriate actions to deal with dysmenorrhoea, including visiting health services.

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