Effect Of Warm Compression And Aromatherapy Toward The Decrease Of Pain Level On Adolescence With Dysminore In Cungkuk,Yogyakarta

Sri Sat Titi Hamaranani[1], Devi Permatasari[2] , Erna Yuliani[3]
Stikes Muhammadiyah Klaten
Email: devisari_07@yahoo.com

ABSTRACT

Introduction: Dysminore is one of situations which is able to cause pain. Dysminore as a result from prostaglandin excessive and it cause contraction of uterus. Also arteriolar become vasospasm. One of nurse's independent intervention to overcome the level of pain problem is warm compression and aromatherapy. Objective: The objective of the research is to know whether there is different effect of warm compression and aromatherapy toward the decrease of pain level on adolescence with dysminore inCungkuk,Yogyakarta. **Method:** The design of this research is quasy experiment with control group pretest posttest, with simple random sampling, and the amount ofsample is 15 respondents. Collection the data is done by using pain scale. Analysis technique is done by paired t- test and Independet sample t-test. **Result:** The result of paired t- test, warm compress efectively reduce a level of pain shows score p = 0,00 < 0,05. The result of paired t- test, aromatherapy efectively reduce a level of pain shows score p = 0,00 < 0,05While the independent simple t-test ,test which is used the difference of warm compression and aromatherapy result the score p = 0,00 < 0,05. **Conclusion:** The conclusion of this research is there is an difference effect betweenwarm compression and aromatherapy toward the decrease of pain level on adolescencewith *dysminore*in Cungkuk Yogyakarta.

Keyword: warm compression, aromatherapy dysminore, level of pain,

A. INTRODUCTION

WHO (2012) explained that reproduction health as phisical prosperous state,mental,social, not only free from disease and weakness on reproductive organs and its function in our lives. Reproductive health is the important thing and need to be payed because it can be a serious problem especially in women. Women are experience a change of reprodustive organs when doing a puberty, which is become an adult be marked a menarche. Menstruation is a bleeding periodicallyand cycle from uterus and release an endometrium (Judha, M dan Erwanto, R, 2011) .

Mensrual cycle has an interval of 26-32 day which is divided into four stadium. That is menstrual stadium, postmenstrual stadium, intramenstrual stadium, dan premenstrual stadium. The menstrual process id followed by

abdominal and pelvis pain. Menstrual disorder consist of hypermenorhrea, hypomenorrhea, poliminorrhea, oligominorrhea, amenorrhea, bleeding not include in menstruation and dysmenorrhea.

Dysmenorrhea as a result from an excessive of prostaglandin and caused an utererus contraction. It is caused a artheriolar vasospasm. Factors which influence a psychological dysmenorrhea as anxiety and tension, menarche in early age (less than 12 years old), nullipara, and excessive bleeding on mestruation, length of mestrual duration, smooking, history of pain in family and obesity. An USA survey which done by 113 patiens shown that 29-44% prevalention experience a dysmenorrhea in women who has 18-45 years old (Calis, 2011)

In the world, dysmenorrhea gets more than 50% among women . in USA, almost 60% and 72% in Sweden. Indonesian prevalence estimated 55% of productive age experience of menstrual pain. The primer dysmenorrhea estimated 54,89% among women. Although the condition is not threatening, but it make a disturbrd in women who has experienced it (Proverawati & Misaroh, 2009).

Anurogo and Wulandari (2011) stated that more women silent related to their condition caused by dysmenorrhea. . the patient feeling shame and ignore the disease so that the prevalence of this disease become unknown. Almost 90 % of women in Indonesia experience in dysmenorrhea. If we ignoring the dysmenorrhea , it will effect to unpleasant feeling and disturbing the daily activity. Thethe effort to reduce the menstrual pain could be using a pharmachological and nonpharmochological treatments.

Several nonpharmachological technique whivh will decrease the pain level were cutaneous message, ice and warm compression , transcutaneous electrics stimulation, distraction, relaxtation technique, guided imagery, and hypnotherapy (Smeltzer & Bare, 2002).Relaxation techniques are independently nursing interventions to reduce the intensity of pain, the mechanism of action of deep breathing relaxation technique is that improving pulmonary ventilation and increases blood oxygenation thus relax the skeletal muscles. This technique is also believed to reduce pain by relaxing the muscles that support the painful tension, there is ample evidence to show that the relaxation is effective in relieving pain (Smeltzer & Bare, 2002). Relaxation techniques (deep breathing) has been proven to reduce the pain scale in women who have dysmenorrhea. A warm

compress can also reduce the pain felt by the individual, like a warm compress wet or dry.

Aroma therapy is one type of alternative medicine using plant material volatile liquid, known as essential oils and aromatic compounds from plants (Setyoadi and Kushariyadi, 2011). Peppermint aroma therapy is used for painful menstruation (Tari, 2012). According to Jilani (2009), some way in the use of aromatherapy, among others, the therapy by oral, inhalation, massage, and water (steaming, steam shower, soaking, and compress). Riniasih (2008), rose aroma therapy proven effective to reduce dysmenorrhea, it is shown before the respondents were given a rose aroma therapy pain scale was as much as 52.7% and after aromatherapy rose by the highest intensity of pain is mild pain, ie 61.8%. This research suggests that aromatherapy can affect the decrease in pain during menstruation. roma therapy is one type of alternative medicine using plant material volatile liquid, known as essential oils and aromatic compounds from plants (Setyoadi and Kushariyadi, 2011). Peppermint aroma therapy is used for painful menstruation (Tari, 2012). According to Jilani (2009), some way in the use of aromatherapy, among others, the therapy by oral, inhalation, massage, and water (steaming, steam shower, soaking, and compress). Riniasih (2008), rose aroma therapy proven effective to reduce dysmenorrhea, it is shown before the respondents were given a rose aroma therapy pain scale was as much as 52.7% and after aromatherapy rose by the highest intensity of pain is mild pain, ie 61.8%. This research suggests that aromatherapy can affect the decrease in pain during menstruation. This peneliatian aims to determine afektifitas aroma to a decrease in pain.

LITERATUR REVIEW

The menstrual cycle is a complex process that includes reproductive and endocrine systems. The ovaries produce steroid hormones, especially estrogen and progesterone. (Smeltzer & Bare, 2002). Role pogesteron regulate uterine changes during the menstrual cycle Progesterone is a hormone that is most important to prepare the endometrium (the mucous membrane lining the uterus) for implantation of the fertilized ovum. If pregnancy occurs, progesterone secretion. is vital to the placenta, maintaining a normal pregnancy and cooperate with estrogen breast preparing to set up lactation.

In the setting of ovarian hormone secretion, there are two gonadotropic hormone released by the pituitary gland that FSH and

LH. Follicle-stimulating hormone (FSH) is mainly responsible for stimulating the ovaries to secrete estrogen. Luteinizing hormone (LH), mainly responsible for stimulating the formation of progesterone. Feedback mechanisms, partially regulating the secretion of FSH and LH. For example, increased levels of estrogen in the blood inhibits the secretion of FSH but increase the secretion of LH, while increased levels of progesterone inhibits the secretion of LH. In addition, gonadotropin-releasing hormone (GnRH) from the hypothalamus affects the speed of the release of FSH and LH. (Bare & Smeltzer, 2002)

The normal menstrual cycle occurs every 22-35 days, the duration of menstruation for 2-7 days. The menstrual cycle, according Kusmiran (2012) consists of four stages, namely 1) Stadium Menstruation, over the next 3-7 days. At that time, the endometrium, or lining of the uterus is released causing bleeding. Ovarian hormones are at the lowest levels. 2) Stadium Proliferation, held on 7-9 days. Starting from the cessation of menstrual blood until day 14. In this phase endometrium grows back. 3) Stadium secretion, after ovulation period lasts 11 days. In this period of progesterone released and affect the growth of the endometrium to make the condition of the uterus is ready for implantation or attachment of the fetus to the uterus. 4) Stadium premenstruasi, lasted for three days. No infiltration of white blood cells, stromal disintegrating with loss of fluids and secretions so that there will be collapse of the glands and arteries. At this time vasoconstriction occurs, then the blood vessels relax and eventually rupture.

Wiknjosastro (2009), said one of the menstrual disorder is dysmenorrhoea. Dysmenorrhea, or menstrual pain is a symptom often causes young women to go to the doctor for consultation and treatment for this disorder is subjective, weight or intensity are difficult to assess .. Almost all women experience discomfort in the lower abdomen before and during menstruation and often nausea and dysmenorrhoea term only used if menstrual pain so great, forcing people to break and leave work or a way of daily life, for a few hours or a few days.

Dysmenorrhea is characterized by painful cramps that started before or immediately after the onset of menstrual flow and continued for 48 to 72 hours. In primary dysmenorrhea classic, painful menstruation begins simultaneously with or just before menstruation and survive or persist for 1-2 days. Pain is described as spasmodic and spread to the rear (back) or the

thigh or upper arm. The symptoms generally include malaise (feeling unwell), fatigue (tiredness), nausea (nausea) and vomiting (throwing up), diarrhea, back pain, headaches and sometimes can also be accompanied by vertigo or sensation of falling, feeling anxious , anxious to faint. (Anurogo and Ari, 2011)

The management of dysmenorrhea according to Astuti (2012) is a pharmacological (medication) and non-pharmacological. Penaatalaksanaan non pharmacological includes relaxation, hypnotherapy, warm compresses and aroma therapy.

Setyoadi, et al (2011) defines the aroma therapy is one type of alternative medicine using plant material volatile liquid, known as essential oils and aromatic compounds from plants. The effects of aromatherapy by inhalation will send signals to the central nervous system. Furthermore, we will stimulate the release of serotonin and endorphin. These hormones influence mood becomes happier and improve mood. Selection of the recommended therapeutic aroma mood.

Therapy using essential oils can be conducted internally and externally according to Jilani (2009) is internally and externally. 1) Therapy Internally, in the form of oil or aqueous liquid, pure essential oils that can be consumed orally (eat or drink by mouth) and inhalation (inhaled through the nose) for 5 to 10 minutes.

How to use essential oils in therapy by oral This is in principle the same as when we use drugs in any other oral therapies. Before starting therapy, essential oils to be used must be diluted prior to the non-alcoholic water solvent, in a concentration of less than 1% (one percent). b) Treatment by inhalation through the sense of smell in humans have a level of sensitivity sharper and sensitive. The sharpness of the sense of smell can reach 10,000 times more powerful than the sense of taste, so it has a strong effect on sensory organs through which the active ingredients of essential oils.

METHODS

The study utilized a quasy experimental pretest posttest (before-after) sith control group design. In this research,the treatment is compare the warm compression and aromatherapy

The study was conducted at Cungkuk village in Yogyakarta in Desember 2014. .the population of this research was all rhe adolescence in Cungkuk village ogyakarta who suffer a dysmenorrhea. The total was 15 participants.the sampling methods was using simple random sampling technique.

Research instruments was using watch, pain scale,aromatherapy prosedure, warm compression procedure, thermometer, water,and towels.

The data analizing was used univariat and bivariat analizing. Univariat analized in this resarch was participants characteristic, pain sclae shown using central tendency tabel. While bivariat analized using paired t test and the comparation between control and intervention group using independent sample t test.

RESULTS

Table 1. pain scale of respondents using warm compression

Treatment	N	Pain scale			
		MIN	MAX	MEAN	SD
Before	26	3	6	4,65	1,018
After	26	1	4	1,81	0,849

Based on the table shown that, before the treatment of warm compression the minimum score was 3, maximum score was 6, and the average of pain scale was 4.65 ± 1.018. while after the compression of warm water, the minumum score was 1, maximum score was 4, and the average of pain scale was 1.81± 0.849. its means there is a decrease of pain scale average after compression using warm water which was 2.85.

Table 2 pain scale of respondents using aromatherapy

Treatments	N	Pain scale			
		MIN	MAX	MEAN	SD
Before	26	3	6	5,04	0,916
after	26	1	5	3,38	1,134

Based on the table above, before the treatment of aromatherapy the minimum score was 3, maximum score was 6, and the average of pain scale was 5.04 ± 0.916. while after the aromatherapy, the minumum score was 1, maximum score was 5, and the average of pain scale was 3.38 ± 1.134. Its means there is a decrease of pain scale average after aromatherapy treatments which was 1.66

Table 3. Effectivennes of warm compression

VARIABEL	df	SD	MEAN	CI 95 %	P Val

				LOWER	UPPER	
Pain scale	25	0,784	0,154	2,529	3,163	0,000

Table 3 shown that warm compression treatments was effective to reduce the pain scale with the significant value p = 0.000 ; α = 0.05. it means that is a significant difference on pain scale before and ater the treatments of warm compression with the CI value 95% between 2.529 to 3.163.

Table 4 Effectivennes of aromatherapy

VARIABEL	df	SD	MEAN	CI 95 %		P Val
				LOWER	UPPER	
Skala Nyeri	25	0,936	0,183	1,276	2,032	0,000

Table 4 shown that aromatherapy treatments was effective to reduce the pain scale with the significant value p = 0.000 ; α = 0.05. it means that is a significant difference on pain scale before and ater the treatments of aromatherapy with the CI value 95% between 1.276 to2.032.

Table 5. the difference of effectivennes between warm compression and aromatherapy toward pain scale

INTERVENTION	N	MEAN DECREASE	SD	MEAN	P Val
Warm compression	26	2,85	0,784	0,154	0,000
Aromatherapy	26	1,65	0,936	0,183	

Table 5 shown that warm compression and aromatherapy was effective to reduce the pain scale on dysmenorrhea with the significant value P = 0.000 ; α = 0.05. It was mean that is different of pain scale average using warm compression and aromatherapy.

DISCUSSION

The findings of effectivenness of warm compression and aromatherapy teratments towards the reduce of pain scale among adolescence who giving the warm compression for 5 munute in three time intervention at the second day and the aromatherapy treatments in the same day shown that the the highest score of pain scale before giving the compression was 6 and the lowest score was 3 with the

average score was 4.65.. after the compression, the highest score was 4 and the lowest score was 1 with the average score was 1.81. while the highest score of pain scale before the aromatherapy treatments was 6 and the lowest was 3 with the average was 5.04. after the aromatherapy treatments, the highest score was 5 and the lowest was 1 with the average wa 3.38.

Based on table 3, it was shown that analize result in warm compression groups was Pval = 0.000 < α = 0.05, it means there is a significant difference of pain scale before and after warm compression. The decrease of pain level because of warm compression will stimulate the skin and make a comfort in uterus contraction. It will expedite the blood flow to uterus and blocking the pain impuls which brougt to cerebri cortex. The mechanism reducing the pain level (Brunner & Sudarth, 2002).

Related to table 4, it was shown that the aromatherapy has a Pval = 0.000 < α = 0.05. it means that there is a significant difference on pain level before and after the aromatherapy treatments. Aromatherapy will stimulate the body to produce the endorphine which was a "pain presser". It was reduce the uterus contraction and expedite the blood flow to uterus with the results that decreasing the pain level (Potter & Perry, 2005).

Table 5 shown that the t test independent result was Pval = 0,000 ; < α = 0.05. it was means that warm compression and aromatherapy were effective towad reducing the pain level on dysmenorrhea among adolescence. The results was supported by the average value of pain level in warm compression was 2.85 while in aromatherapy was 1.65.

The difference of significant pain level reducing between warm compression and aromatherapy was got that warm compression more effective than aromatherapy. The factor of pain level reducing was influenced by ages, menarche, nutrition state and stress level.

The findings shown that the both groups has the average of menarche was < 12 years old. It was means that the pain level not only influenced by the menarche factors but also the ages (Anurogo, 2008). The nutrients state problem in adolescence because the wrong nutrition which was inbalance between a consume of food and the recommended of nutrients needed (Gsianturi, 2002).. junk food was a fovourite food in adolescence which has a less of calcium, ribovlavin, fe, folic acid, vitamine A and C while it has a high of cholesterol, natrium and fatty acid. Prostaglandin was

downgraded from junkfood. While the prostaglandin was in thought to cause a dysmenorrhea(Utami, 2009). The stress factors inflenced the dysmenorrhea pain because stress response was coordinated by otonom which consist of simpatis and parasimpatis nerve. Dysmenorrhea pain inflicted by the imbalance of otonom nerve to miometrium. In this condition, there was excessive stimulation on simpatis nerve. It was causecircular fiber become a hypertonic (Irawan 2007).

In menstrual cycle,the luteal phase or secretion phase, it was happen after the releasing of ovum, the broken folicle will close to form corpus luteum which was producea a progesterone in a big amounts. In this phase, endometrium was covered by glycogen which will be as a feed of fertilized zygote or ovum(Prawirohardjo, 2007). In menstrual time, there is a release of endometrium cells, which was release a prostaglandin. Prostaglandin stimulate tne uterys contraction and blood vessel. It was cause an ischemia in uterus. Prodtaglandin was in thougt to be a mai factor on dysmenorrhea pain (Anurogo & Wulandari, 2011). Menstrual pain happen in suprapubic such as lower abdomen,back, and thight starting from 48-72 hours related to abdomen hug. It was caused by irreguler uterus movementsto expeled the blood (Reeder, dkk, 2011). Menstrual pain was a general gynecology symptoms that make a women going to doctors. The women left the routine activity and her work because of it (Anurogo & Wulandari, 2011). Even if the brain accepted the pain stimulates, it will released a neurotransmitter inhibitor (endorphin and enkefalin). It will block and help to kill the pain in the body (Brunner & Sudart, 2002).

The treatmens of menstrual pain could be nonpharmachologicaly such as warm compression and aromatherapy. The other treatment could be biofeedback,hypnosis, and stimuation of cutaneus (Potter & Perry,,2005). The findings correspondings to Ekawati dkk research " effectiveness of warm compression toward the intensity of pain in primary dysmenorrhea among a collage student in Brawijaya Malang".

CONCLUSSION

The reducing of pain level average before the warm compression was 4.65 ± 1.018 and after the treatments was 1.81± 0.849 . its means there is a decrease of pain scale average after

compression using warm water which was 2.85.

The reducing of pain level average before the aromatherapy was 5.04 ± 0.916 and after the treatments was 3.38 ± 1.134. its means there is a decrease of pain scale average after compression using warm water which was 1.66 warm compression treatments was effective to reduce the pain scale with the significant value p = 0.000 ; α = 0.05 aromatherapy treatments was effective to reduce the pain scale with the significant value p = 0.000 ; α = 0.05 warm compression and aromatherapy was effective to reduce the pain scale on dysmenorrhea with the significant value P = 0.000 ; α = 0.05.

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