J. Appl. Environ. Biol. Sci., 8(3)51-59, 2018
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ISSN: 2090-4274
Journal of Applied Environmental and Biological Sciences
www.textroad.com

Potential of Acupressure on Sanyinjiao Point, Hegu Point and Massage Effleurage to Decrease Menstrual Pain Intensity

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Received: November 12, 2017
Accepted: February 3, 2018

ABSTRACT

Dysmenorrhea is a painful during or shortly before menstruation. Dysmenorrhea can giving some impact for some women, one of the impact is make troubles for their daily activities. Non-pharmacological efforts for handling dysmenorrhea include acupressure on Sanyinjiao point, Hegu point and Massage Effleurage. The aim of this study was to explain the effect of acupressure on Sanyinjiao point, Hegu point and Massage Effleurage to decreasing intensity of menstrual pain. The research design used Quasy Experiment with Pretest-Postest Design and used Purposive Sampling technique to collect the samples. The sample in this research was adolescent at Islamic boarding school of Darul Ulum Jombang who had menstrual pain experience. The researcher used NRS (Numeric Rating Scale) to measured intensity of menstrual pain. The data were analyzed by Friedman and Kruskal-Wallis test with $\alpha \leq 0.05$. The results of this study showed the intensity of menstrual pain before getting treatments in all three groups were comparable ($p > 0.05$); there was significant differences of intensity of menstrual pain on acupressure group SP6 vs acupressure LI4 and group of acupressure SP6 vs Massage Effleurage with significance value was $p < 0.05$; there was no significant differences between the acupressure group of LI4 vs the Massage Effleurage group with $p > 0.05$. Moreover, SP6 acupressure was more effective than LI4 acupressure and Massage Effleurage, LI4 acupressure was effective than Massage Effleurage. Acupressure at Sanyinjiao point, Hegu point and Massage Effleurage effectively reduce the intensity of menstrual pain, so it can be used as an alternative intervention to decreasing the intensity of menstrual pain.

KEYWORDS: menstrual pain, acupressure, massage effleurage

INTRODUCTION

Dysmenorrhea is painful during or shortly before menstruation, it is one of the most maternity problems among women in all ages. Commonly, dysmenorrhea occurs among adolescents and it occurs in the first three years after menarche [1]. However, dysmenorrhea also begins after the first menstruation (menarche). Usually, dysmenorrhea or pain can decreases after menstruation, but in some women the pain can continue during the menstrual period and this pain giving impact and disturb their daily activities.

Pharmacological and Non-Pharmacological therapies were handling dysmenorrhea. Non-pharmacological therapy for handling dysmenorrhea includes acupressure at Sanyinjiao point, Hegu point and Massage Effleurage. However, the difference of effect in each point was not clearly mention on research.

According to Pouresmail [2], dysmenorrhea is a common gynecological problems among female adolescent and women in reproductive age. Prevalence of dysmenorrhea problem was varieties in this world, an estimated 56.4% in China, 51% in Turkey, 67% in Sweden, 80% in Western Australia, 85% in Spain and 60-90% in the United States. Moreover, about 73.3% among Taiwanese high school girls (average age 16.7 years) [3], 20% to 90% in France [4]. However, an estimated 64.25 % of incidence of dysmenorrhea in Indonesia and including 54.89 % primary dysmenorrhea and 9.36% secondary dysmenorrhea and about 55% productive women feel tortured due to dysmenorrhea [5]. Dysmenorrhea giving impact on 75% of all women, 50% reported got mild symptoms, 30% have moderate symptoms, and 20% have severe symptoms [6].

According to French [7] factors were contributed to dysmenorrhea include early age of menarche, increased menstrual bleeding, alcohol and tobacco use, low socioeconomic status, obesity, and depression/

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anxiety. Moreover, factors that may affect primary dysmenorrhea include: psychological factors, constitutional factors, cervical canal (cervical), canal obstruction, endocrine factors and allergic factors [8]. The dysmenorrhea symptoms are painful at the lower abdomen and back [9]. If this not treated, the pain will spread to the waist and thighs, following nausea and vomiting, headaches, diarrhea and irritability. The degree of menstrual pain was varies, it range from slight to severe, so it also influenced or disturb their daily activities [10].

Treatments to manage menstrual pain (dysmenorrhea) can be given by pharmacology and non-pharmacology. Pharmacologic treatment of dysmenorrhea is usually successful, but about 20-25% was failed. NSAIDs are primary choice for treatment but occasionally it was given gastrointestinal effects, so alternative treatment or non-pharmacological was other chooses to handling of dysmenorrhea [7]. Non-pharmacological therapy for handling dysmenorrhea is includes acupressure and massage Effleurage. Acupressure is one form of physiotherapy, it is providing massage or stimulation at certain points on the body. Previous research said that during six months of follow-up, acupressure at Hegu and Sanyinjiao points can reduce pain, suffering and dysmenorrhea anxiety [11]. The results also in line with the results of that study [2], the research mentioned that acupressure at the Sanyinjiao point (SP6) is one of non-invasive nursing intervention and this can reduce pain of primary dysmenorrhea and 3 hours post treatment effects.

Acupressure at Sanyinjiao point and Slow Stroke Back Massage effectively decreases the intensity of menstrual pain [12]. Massage Effleurage is a form of massage by using a gentle Yuan giving a soft pressure over the surface of the body in a circular direction repeatedly [13]. Skin stimulation causes the release of endorphins, thus it was blocked of the transmission of pain. The gate control theory said that the stimulation of the skin activates the transmission of A-Beta sensory nerve fibers larger and faster. This process decreases the transmission of pain through fibers C and delta-A of small diameter so that the synapse gate closes the transmission of pain impulse [14]. Based on the above phenomenon, researchers are interested in taking the title of "Potential Acupressure at the Sanyinjiau point, Hegu Point and Massage Effleurage for decreasing Intensity of Menstrual Pain (Dysmenorrhea)".

RESEARCH METHODS

This study was used Quasy Experimental design with Pretest-posttest control group design, it mean that this research reveals causal relationship with involving control group while also involving experimental group [15]. The population in this study were adolescent female in Islamic boarding school of Darul Ulum Jombang and who had menstrual pain experience (dysmenorrhea). Consecutive sampling method used to collect 90 respondents by used inclusion criteria. The inclusion criteria in this study were: 1) adolescents who have primary dysmenorrhea; 2) Adolescents who have not received anti-pain therapy; 3) adolescents who are cooperative. However, the exclusion criteria were: 1) adolescents who have secondary dysmenorrhea; 2) The adolescents who refuse while getting intervention. The first group was given acupressure at the Sanyinjiao point (Acupressure SP6), the second group was given acupressure at the Hegu point (LI4) and the third group was given a Massage Effleurage. NRS (Numeric Rating Scale) used to measure pain scale and the data were analyzed using Friedman test and Kruskal-Wallis test with $\alpha \leq 0.05$.

RESULTS AND DISCUSSION

Characteristics of respondents in this study include: 1) Age; 2) Age of Menarche; 3) Cycle of Menstruation; and 4) Period of Menstruation; 5) volume of Menstruation. Characteristics of respondents in this study were presented in frequency distribution table (Table 1). Primary data were presented of characteristics of respondent and the homogeneity of the three groups.

Tabel 1. Characteristic of sample and homogeneity

Variable		*Akupresure SP6*		*Akupresure LI4*		*Massage Effleurage*		p-value
		N	%	N	%	N	%	
1.	Age							
	a. 13 years old	1	3.3	1	3.3	0	0	0.101
	b. 14 years old	4	13.3	4	13.3	2	6.7	
	c. 15 years old	5	16.7	12	40	4	13.3	
	d. 16 years old	0	0	2	6.7	7	23.3	
	e. 17 years old	10	33.3	2	6.7	4	13.3	
	f. 18 years old	4	13.3	2	6.7	8	26.7	
	g. 19 years old	1	3.3	2	6.7	4	13.3	
	h. 20 years old	2	6.7	3	10	1	3.3	
	i. 21 years old	3	10	2	6.7	0	0	
2.	Age of Menarche							
	a. 11 years old	4	13.3	5	16.7	11	36.7	0.013
	b. 12 years old	15	50	12	40	16	53.3	
	c. 13 years old	3	10	9	30	2	6.7	
	d. 14 years old	5	16.7	1	3.3	1	3.3	
	e. 15 years old	3	10	2	6.7	0	0	
	f. 16 years old	0	0	1	3.3	0	0	
3.	Cycle of Menstruation							
	a. Regular	23	76.7	21	70	28	93.3	0.000
	b. Irregular	7	23.3	9	30	2	6.7	
4.	Period of Menstruation							
	a. 7 days	18	60	20	66.7	5	16.7	0.226
	b. 8 days	4	13.3	3	10	7	23.3	
	c. 9 days	5	16.7	3	10	15	50	
	d. 10 days	3	10	2	6.7	3	10	
	e. 11 days	0	0	2	6.7	0	0	
5.	Volume of Menstruation							
	a. Small	1	3.3	1	3.3	0	0	
	b. Average	22	73.3	20	66.7	17	56.7	0.157
	c. Much	7	23.3	9	30	13	43.3	

Source: Primary data, 2017

Before giving intervention for three groups (acupressure Sanyinjiao point group (SP6), acupressure Hegu point group (LI4) and Massage Effleurage group). Firstly, the researcher measured the intensity of menstrual pain (pre-test). After that the data were analyzed by Kruskal-Wallis test to determine the differences of menstrual pain intensity in the three groups as shown in table 2 and 3 below:

Table 2. Intensity of menstrual pain (*Dismenorea*) before giving intervention

Intensity of menstrual pain	*Akupresure SP6*		*Akupresure LI4*		*Massage Effleurage*	
	N	%	N	%	N	%
a. Mild	0	0	0	0	2	6.7
b. Moderate	24	80	23	76.7	20	66.7
c. Severe	6	20	7	23.3	8	26.6
Total	30	100	30	100	30	100

Source: Primary data, 2017

Table 3. The differences of Intensity of menstrual pain (*Dismenorea*) before giving intervention

Group	Median (Minimum-Maksimum)	p
Acupressure SP6	5.50 (4 – 8)	0.934
Acupressure LI4	5.50 (4 – 8)	
Massage Effleurage	6 (3 – 8)	

Post Hoc Mann-Whitney test: Acupressure SP6 vs Acupressure LI4 p=0,970; Acupressure SP6 vs Massage Effleurage p=0,727; Acupressure LI4 vs Massage Effleurage p=0,779.

After given intervention for three groups. The group are acupressure Sanyinjiao point group at (SP6), acupressure Hegu point group (LI4) and Massage Effleurage group for 20 minutes, the researched measured the intensity of menstrual pain at post immediately, post 30 minutes, after 1 hours, after 2 hours and 3 hours after given intervention. After that, the data were analyzed by used Kruskal-Wallis and Post

Hoc test to find the differences of menstrual pain intensity in each group. The data as shown in table 4, table 5 and table 6 below:

Table 4. The differences of Intensity of menstrual pain (*Dismenorea*) after giving intervention

	Group	Median (Minimum-Maximum)	p
Post Immediately	Acupressure SP6	3 (2 – 7)	0.002
	Acupressure LI4	4.5 (2 – 8)	
	Massage Effleurage	5 (2 – 8)	
Post 30 minutes	Acupressure SP6	3 (1 – 7)	0.018
	Acupressure LI4	4 (2 – 8)	
	Massage Effleurage	4 (2 – 8)	
Post 1 hour	Acupressure SP6	3 (1 – 7)	0.104
	Acupressure LI4	3 (1 – 7)	
	Massage Effleurage	3 (1 – 7)	
Post 2 hours	Acupressure SP6	2 (1 – 5)	0.039
	Acupressure LI4	3 (1 – 6)	
	Massage Effleurage	3 (1 – 6)	
Post 3 hours	Acupressure SP6	2 (1 – 4)	0.008
	Acupressure LI4	3 (1 – 6)	
	Massage Effleurage	2.5 (1 – 6)	

Source: Primary data, 2017

Table 5. Post Hoc test The differences of Intensity of menstrual pain (*Dismenorea*) before giving intervention and after giving intervention

	Group	p
Post Immediately	Acupressure SP6 vs Acupressure LI4	0.004
	Acupressure SP6 vs Massage Effleurage	0.002
	Acupressure LI4 vs Massage Effleurage	0.722
Post 30 minutes	Acupressure SP6 vs Acupressure LI4	0.015
	Acupressure SP6 vs Massage Effleurage	0.014
	Acupressure LI4 vs Massage Effleurage	0.928
Post 1 hour	Acupressure SP6 vs Acupressure LI4	0.066
	Acupressure SP6 vs Massage Effleurage	0.066
	Acupressure LI4 vs Massage Effleurage	1.000
Post 2 hours	Acupressure SP6 vs Acupressure LI4	0.027
	Acupressure SP6 vs Massage Effleurage	0.030
	Acupressure LI4 vs Massage Effleurage	0.951
Post 3 hours	Acupressure SP6 vs Acupressure LI4	0.002
	Acupressure SP6 vs Massage Effleurage	0.067
	Acupressure LI4 vs Massage Effleurage	0.256

Source: Primary data, 2017

Table 6. The differences of Intensity of menstrual pain (*Dismenorea*) after giving intervention

Group		Median (Minimum-Maximum)	p
Acupressure SP6	Before giving intervention	5.5 (4 – 8)	0.000
	Post immediately	3 (2 –7)	
	Post 30 minutes	3 (1 –7)	
	Post 1 hour	3 (1 –7)	
	Post 2 hours	2 (1 –5)	
	Post 3 hours	2 (1 –4)	
Acupressure LI4	Before giving intervention	5.5 (4 – 8)	0.000
	Post immediately	4.5 (2 – 8)	
	Post 30 minutes	4 (2 – 8)	
	Post 1 hour	3 (1 – 7)	
	Post 2 hours	3 (1 – 6)	
	Post 3 hours	3 (1 – 6)	
Massage Effleurage	Before giving intervention	6 (3 – 8)	0.000
	Post immediately	5 (2 – 8)	
	Post 30 minutes	4 (2 – 8)	
	Post 1 hour	3 (1 – 7)	
	Post 2 hours	3 (1 – 6)	
	Post 3 hours	2.5 (1 – 6)	

Source: Primary data, 2017

Based on the results of Friedman test showed there was a significant difference in the intensity of menstrual pain in the three groups before treatment and after treatment as shown in table 7.

Tabel 7. Post Hoc test The differences of Intensity of menstrual pain (*Dismenorea*) before giving intervention and after giving intervention

Kelompok		p
Akupresure SP6	Before giving intervention vs Post immediately	0.000
	Before giving intervention vs Post 30 minutes	0.000
	Before giving intervention vs Post 1 hours	0.000
	Before giving intervention vs Post 2 hours	0.000
	Before giving intervention vs Post 3 hours	0.000
Akupresure LI4	Before giving intervention vs Post immediately	0.000
	Before giving intervention vs Post 30 minutes	0.000
	Before giving intervention vs Post 1 hours	0.000
	Before giving intervention vs Post 2 hours	0.000
	Before giving intervention vs Post 3 hours	0.000
Massage Effleurage	Before giving intervention vs Post immediately	0.000
	Before giving intervention vs Post 30 minutes	0.000
	Before giving intervention vs Post 1 hours	0.000
	Before giving intervention vs Post 2 hours	0.000
	Before giving intervention vs Post 3 hours	0.000

Source: Primary data, 2017

The results of this study showed that the intensity of menstrual pain before interventions were relatively equivalent or same in all three groups. The intensity of menstrual pain at the acupressure of SP6 group and the acupressure of LI4 group were at moderate level, and the intensity of menstrual pain at the Massage Effleurage group was also at moderate level. However, at statistical analysis results obtained p value was 0.934. This means that the intensity of menstrual pain among three groups were not have any significant differences.

Dysmenorrhea is pain and painful while menstrual period [16]. Commonly, dysmenorrhea was come during menstruation and the patients felts painful, and stiffness or cramps in the lower abdominal area and pelvis [17]. Dysmenorrhea also one of the most common gynecological problems among women, more than 50% of women had dysmenorrhea experience and this giving impact for women like an inability of daily activities, about 10% of women can't do their daily activities for 1 to 3 days in each month. Moreover, about 25% of adolescent can't come to the school because of dysmenorrhea [13].

The pain that occurs during menstruation is caused by hormonal imbalance factor. It is increased of secretion of prostaglandin hormone which causes enhancement of uterine contraction so this will make ischemia of body system [18]. In addition Prostaglandin can stimulate the nerve pain in uterus so this make more pain. After ovulation, the response of progesterone production, the fatty acids in phospholipids are increasing than Arachidonic acid is released and it started to prostaglandin cascade in the uterus. F2α Prostaglandin makes Myometrial Hypertonus and vasoconstriction so impact of this process was ischemia and pain [19].

The symptoms of dysmenorrhea are pain at the lower abdomen and back, and also cramps [9]. However, if the symptoms are untreated so the pain will spread to the waist and thigh area, followed nausea and vomiting, headache, diarrhea and irritability [10]. In addition, dysmenorrhea can disturb daily activities, not entering school or workplace, physical mental disorders and socio-economic or family problems [20].

The results of this study showed that the intensity of menstrual pain (dysmenorrhea) among acupressure SP6 group and Acupressure LI4 group were at moderate level, the intensity of menstrual pain among Massage Effleurage group was at moderate level. The results were in line with previous studies, the study mentioned that some adolescents who experienced menstrual pain (dysmenorrhea) are in moderate category [21] and according to the opinion [10], which states that the degree of menstrual pain is varies from the mild to the very severe.

Dysmenorrhea can occur at various age levels, in this study showed that the respondent who got acupressure SP6 and acupressure LI4 were aged 13 to 20 years old. However, the respondent who got Massage Effleurage aged 14 to 20 years old

The results of this study were consistent with previous studies, that study mentioned that dysmenorrhea was occurs among female who aged 10 to 20 years old and only 40% of female who tolerant with dysmenorrhea. Sohyune (2016) also said that dysmenorrhea can occur in every level of ages [22]. Dysmenorrhea is the most common gynecological problem, especially among young female. Age of menarche and menstrual periods are factors affecting dysmenorrhea [23]. This result showed that the age of menarche among group who got acupressure SP6 were 12 years old, and age of menarche among group who got acupressure LI4 were only half those aged 12 years old. However, age of menarche among group who got massage effleurage aged 12 years old. For the duration of menstruation among respondents were 7 days. This study was consistent with previous opinion, they states that the prevalence of menstrual pain and the severity of menstrual pain were associated with early age of menarche factors and duration of menstruation [24].

Statistical results of this study showed that there was a decrease of intensity of menstrual pain before giving intervention and after giving intervention among three groups with p value 0,000, this indicate that the intensity of menstrual pain before giving intervention and after giving intervention there was a significant of differences. However, Wilcoxon Post Hoc test results showed that the decrease of pain intensity was occur at immediate time, after 30 minutes, after 1 hour, after 2 hours and after 3 hours after giving intervention with $p < 0.05$, or $p = 0.000$. This analysis showed that there were differences of menstrual pain before giving intervention and after giving intervention among three groups, this mean that there was an effect of SP6 acupressure, LI4 acupressure and Massage Effleurage on the intensity of menstrual pain on 3 hours after giving intervention. Moreover, the decrease of pain intensity at the SP6 acupressure group with the lowest score of pain intensity was 1 and highest score of pain intensity was 4.

Acupressure is one of physiotherapy form with providing massage or stimulation at some points of the body [25]. Acupressure SP6 is a treatment for menstrual pain by giving massage or stimulation at SP6 point, the location on four fingers above the ankle bone or three Cun Proximal Prominens Maleolus Medialis, the right on the posterior Tibia. However, acupressure at Hegu point is a treatment for menstrual pain with provides a massage at point LI4. The location is between the metacarpal os I and II of the mid radial metacarpal os II [26]. Based on Gate Control Theory acupressure activates the innervate mechanoreceptors of sensory nerve fibers, A-beta and / or A-delta depending on the pressure intensity, so this causes inhibition of pain transmission level at the spinal. It is also possible that acupressure activates the pain-inhibiting center so causes the activation of the descending pain [27].

Massage effleurage is a movement by using palms than attached the part of body than give smooth massage and relaxing. Massage effleurage was aim to improving blood circulation, giving warm on abdominal muscles, and promote physical and mental relaxation [28]. Massage Effleurage is one form of skin stimulation. Cutaneous stimulation is a skin stimulation performed to relieve pain, encouraging the release of endorphins, and blocking the transmission of pain stimuli. This was related with Gate-Control theory. The Gate-Control theory said that cutaneous stimulation (massage) was activated the transmission of A-beta sensory nerve fibers so it will make reduction of pain transmission on C fibers and A-delta fibers as well as closing the synaptic gates for transmission of pain impulses. Meek (1993) said that touch and massage are a sensory integration technique that affects the activity of the autonomic nervous system, if the individual perceives that a touch as a relax stimulus, then will appear relaxation response. The cutaneous stimulation also can reduce the perception of pain and help reduce muscle tension. On the contrary the muscle tension can increase pain [14].

The results of this study indicate that there was an effect of acupressure SP6, acupressure LI4 and Massage Effleurage to the intensity of menstrual pain on 3 hours after giving intervention. The results of this study was consistent with previous studies which mentioned that acupressure at the Sanyinjiao point (SP6) could be an non-invasive nursing intervention because this can reduce primary dysmenorrhea at 3 hours after giving [2]. The results of the study [29], also mentioned that acupressure at Hegu point (LI4) can significantly decrease the intensity of menstrual pain. Moreover, the results of previous studies showed that a massage can decrease menstrual pain [30], other study also mentioned that a massage was effectively decreases menstrual pain on 15 minutes after intervention. The results of this study were also in accordance with previous studies, this study showed that there is an effect of massage effleurage to decrease the intensity of menstrual pain [31, 32].

Friedman's test results showed that there was significantly effect of acupressure on the Sanyinjiao point to decreasing intensity of menstrual pain (dysmenorrhea). Acupressure at Sanyinjiao point can

decrease the intensity of menstrual pain about 4 score. This occurs if Acupressure was performed at the SP6 point on right and left legs as deep as 0.5 to 1 cun for 20 min (120 cycles, each cycle was gave strong pressure with vertically style for 8 seconds and 2 second for break). The results of this study were consistent with previous studies which found that acupressure at the Sanyinjiao point so this can decrease menstrual pain at 2 hours after giving intervention [20, 33]. Other studies also said that acupressure was significantly affect the decrease of primary menstrual pain [34, 35].

The results of this study showed that there was significantly influence of acupressure at point Hegu (LI4) to decrease intensity of menstrual pain (dysmenorrhea). Acupressure at point LI4 can decrease the intensity of menstrual pain about 2 score. This occurs if acupressure was performed at the appropriate point and followed at the Hegu point on the right and left hands as deep as 0.5 to 1 cun for 20 minutes (120 cycles, each cycle with provide strong pressure with vertically style for 8 seconds and 2 second for break). During the six months of follow-up, acupressure at Hegu point and Sanyinjiao point were reduce the pain, suffering and dysmenorrhea anxiety [11].

Friedman test results obtained that the Massage Effleurage significantly affect the decrease in the intensity of menstrual pain. Massage Effleurage can decrease the intensity of menstrual pain of 2. This happens if the Massage Effleurage is done by giving massage by using two palms than give soft pressure on the body with regularly circular from the lower back to the top until the respondent feels comfortable, commonly for 20 minutes. The effleurage technique provides warmth to the skin, relieves pain and promotes relaxation so make comfort [36].

The statistical analysis using the Kruskal-Wallis test showed that there was significant difference of the intensity of menstrual pain within 30 minutes, 2 hours and 3 hours after giving intervention <0,05). However, the analysis result at 1 hour after giving showed that there was no significant difference of pain menstruation intensity with p> 0,05. The result of Mann-Whitney Post Hoc test showed that there was significant difference of menstrual pain intensity among acupressure group SP6 vs acupressure LI4 and group of acupressure SP6 vs Massage Effleurage with significance value of p <0,05. The results also showed no significant difference between acupressure group LI4 vs group Massage Effleurage with p> 0,05.

The results of the clinical and analytical trials show that SP6 acupressure is more effective than LI4 acupressure and Massage Effleurage. Moreover, LI4 acupressure is as effective as the Massage Effleurage. The decrease of the intensity of menstrual pain (dysmenorrhea) was accordance with the gate control theory. If there is an big impulse transmitted such as skin stimulation, touch, vibration, warm and cold, and subtle touch. So the impulse will inhibit the impulse in the area of substance Gelatinosa so that the sensations which carried by small fibers will be reduced even can't feel painful sensation, this condition refers to "closed gate" [14]. This conclude that the degrease of intensity of menstrual pain make *Santriwati* (participants) do their activity including daily activities in the school or campus. The decreasing intensity of adolescent menstrual pain in this case *santriwati* can carry out daily activities in the dormitory or at school or campus. Sanyinjiao acupressure point, Hegu acupressure point and Massage Effleurage not only can apply for respondent in this research but also can use for women who had dysmenorrhea.

CONCLUSION

Acupressure at Sanyinjiao point (SP6) more effective than acupressure at Hegu point (LI4) and Massage Effleurage. Moreover, acupressure at Hegu point (LI4) had same effective with Massage Effleurage. However, acupressure at Sanyinjiao point (SP6), Hegu point (LI4) and Massage Effleurage were effectively decreased the intensity of menstrual pain at 3 hours after giving intervention, so these three of interventions can be used as an alternative intervention to decreasing the intensity of menstrual pain.

ETHICS

Ethics this study was approved ethical clearance from Ethical Commission of Health Research in Health Polytechnic, Kemenkes Malang.

AKCNOWLEDGMENT

Praise be to Allah. May the peace and blessings of Allah be on the last Prophet and Messengger, Nabi Muhammad SAW and on his household and companions. The completion of this research was supported and giving encouragement either directly or indirectly. Therefore, my express gratitude as much

as possible to: 1) Prof. DR. H. A. Zahro, MA., As the Rector of University of Pesantren Tinggi Darul Ulum Jombang who has motivated to conduct this research; 3) Andi Yudianto, S. Kep., Ns., M. Kes., As Dean of the Faculty of Health Sciences Unipdu who has given opportunity to the researcher to carry out this research; 4) Drs. Moh. Yahya Ashari, M.Pd, as Head of Research Department of University of Pesantren Tinggi Darul Ulum Jombang who facilitated the researcher along doing this research; 5) All parties who have participated in this research.

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