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ORIGINAL RESEARCH

The Effect of Acupressure on Menstrual Pain

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Abstract

Objective: Dysmenorrhea causes women who are working and students to lose business power, school absenteeism, and serious economic loss. This study was conducted to demonstrate the effectiveness of acupressure to reduce the pain of dysmenorrhea.

Material-Method: This study is a randomized controlled experimental trial that was conducted. The population of the study consisted of 480 female students, between November 2016- and June 2017. The sample of the study was determined as a minimum of 38 individuals for each group using power analysis. 90 female students, who met the inclusion criteria and signed informed consent forms, were included in the sample. The data were collected using Information Form, Menstrual Symptom Questionnaire, and Visual Analog Scale. Acupressure was applied to the acupuncture points of hand and foot areas in the experimental group in the company with music for 10 minutes. The control group was made to relax in the company with music for 10 minutes. Pain assessment was performed with VAS before the procedure and on the 30th, 60th, and 120th minutes after the procedure for both groups. The data were assessed using the Chi-square test, Yates chi-square Fisher exact test, numbers, and percentages.

Results: The present study had more application points (LI4 and SP6 on both arms and legs) and a shorter application time (10–12 minutes) and the experimental group's pain measurements 30th, 60th, and 120th minutes after the procedure decreased considerably.

Conclusion: Acupressure is a very effective means of decreasing dysmenorrhea. It can be assumed that applying acupressure with the same intensity for a shorter time is effective in reducing menstrual pain.

Keywords: Acupressure, Dysmenorrhea, Primary Dysmenorrhea, Pain, Midwife, Complementary and Alternative Therapy

INTRODUCTION

Primary dysmenorrhea is one of the most common gynecological problems that are mostly seen in young and nulliparous women during reproductive age and is not related to pelvic pathology[1]. Its prevalence in women of reproductive age varies between 16% and 91%[2]. One year after menarche, the primary dysmenorrhea occurring during the ovulatory period is a condition lasting mostly for 2-3 days and being accompanied by many gastrointestinal system complaints (nausea, vomiting, diarrhea, etc.) along with the pain spreading to the lower abdomen region, waist, back and legs for up to 2-3 days [1,3-5]. Women experience menses every 28–30 days on average from menarche to menopause, meaning they spend a total of about 4 years of their lives trying to cope with the resulting dysmenorrhea. This situation can negatively affect their education, work, and social life [5,6].

There are two ways to cope with primary dysmenorrhea. The first and frequently preferred are pharmacological methods. The second are non-pharmacological methods, including acupuncture, acupressure, and heat application, which many international studies have proven to reduce dysmenorrhea [3,7-8].

Acupuncture, widely used in China for more than 2000 years, is one of the oldest known medical therapies. The philosophy of this treatment is based on the self-repair of the human body [9-11]. Theoretically, acupressure opens the capillaries and regulates and increases the blood flow in the area. Accordingly, oxygen is transported more quickly and effectively to all parts of the body. It also

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supports the secretion of neurotransmitters, activates the release of chemicals in the blood such as beta-endorphin, serotonin, dopamine, and noradrenaline, and accelerates the transmission of electromagnetic signals. Thus, the immune system strengthens, the energy in the body increases, and the pain decreases. As a result, the body maintains its normal functions [5,7-8,10-12]. As such, acupressure is a method widely used in the world for reducing the complaints such as primary dysmenorrhea, pain, toothache, distress, fibromyalgia, and fatigue[10-11,13-14]. In the studies conducted on primary dysmenorrhea, dysmenorrhea and other systematic symptoms developing depending on these were determined to decrease within 2-3 hours after the acupressure application [5,7-8].

In today's society, traditional medicine is thought to be "natural" compared to modern medicine and it is thought that nature has the cure for everything. Due to the increased interest of the individuals forming the society in the non-pharmacological methods, it has become a necessity for healthcare professionals to take a part in complementary therapies. The social, economic, and psychological effects of these negativities experienced by women, who play an important role in the formation of healthy individuals and societies, throughout their lives due to the menstrual pain on the health of women cannot be ignored. Therefore, learning and performing non-invasive interventional practices for the elimination of the negativities, experienced by individuals due to dysmenorrhea, by the midwives or nurses who have the closest contact, especially with the women of the reproductive age are among their duty, authority and responsibilities. The aim of the study was to obtain data showing the efficacy of acupressure that would help midwives and nurses in controlling the pain of young girls with primary dysmenorrhea.

MATERIALS AND METHODS

Materials

Research design and participants

The study was conducted with the students studying in midwifery and nursing departments (total of 560 female student) of Kırklareli University School of Health between November 2016-June 2017. There are a total of 560 female students studying at Kırklareli University Health High School midwifery and nursing departments. The population of the study consisted of 480 female students who were voluntary to participate in the study and were at school on that day. G-Power analysis was used in the sample calculation (Version 3.1). The minimum total sample size was determined as 76 cases. With the thought that there would be lost in the cases, the sample was decided to be as 45 for each group. In addition, according to the retrospective power analysis after collecting the data, the power of the study was found as 100% for the experimental group and 99% for the control group. It was seen that the sample size in the study was sufficient.

Inclusion criteria

Can speak and understand Turkish, single and between the ages of 18 and 25, menstruates at regular intervals (21–35 days), did not take analgesics or non-steroids at least 6 hours before the procedure, did not perform any relaxing non-pharmacological practices to relieve pain at least 3 hours before the procedure, signed the informed consent form

Exclusion criteria

Uses oral contraceptives, uses an intrauterine device (IUD), diagnosed with a gynecological disease or secondary dysmenorrhea (polycystic ovarian syndrome, ovarian cysts, pelvic infection, endometriosis, adhesions in the fallopian tubes, menstrual irregularity, uterine myoma, irritable bowel infection), has a chronic disease, has a history of surgery or deterioration of tissue integrity (lower abdomen, uterus, ovaries, intestine, bladder operation), has a psychiatric disease, pregnant.

In the selection of the students meeting the inclusion criteria, the Descriptive Information Form, Menstrual Symptom Questionnaire (MSQ), and Visual Analog Scale (VAS) were used.

Data collection tools

Descriptive information form

This form was developed by the researchers in accordance with literature information. The form has a total of 29 questions defining the socio-demographic characteristics and primary dysmenorrhea.

Menstruation symptom questionnaire (MSQ)

It was developed by Chesney and Tasto in 1975. It was then re-evaluated on adolescents and updated by Negriff et al., in 2009[15]. The questionnaire is a five-point likert type scale and composed of 24 items. The MSQ score is calculated by taking the total mean score of the items on the scale. The original version of the questionnaire has three subscales. These are Negative Affect/Somatic Complaints', 'Menstrual Pain' and 'Abdominal Pain'. Increased mean scores for subscales indicate that the severity of menstrual symptoms for that subscale is increasing. Its Turkish validity and

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sensitivity study was carried out by Güvenç et al., in 2014[16].

Visual analog scale (VAS)

It was developed and used by Bond and Pilowsky in 1966 for the first time. VAS is a 0-10-cm ruler with "no pain" at one end and "worst pain" at the other end. Since the vertical VAS gives quick results and is easy to understand, it is thought to be the most appropriate scale for determining the severity of acute pain[17-18]. A separate form was used for each pain evaluation of girls who have primary dysmenorrhea in the present study. This form was adapted to Turkish by Aslan and Ontürk[19].

Ethical considerations

Written consents were obtained from the female students studying in the midwifery and nursing departments and approval was obtained from the Ethics Committee of Kırklareli University School of Health (Date:11.11.2016), Kırklareli University Institute of Health Sciences before starting the application. The researcher responded to all questions of the students in the experimental and control groups and conducted the processes. The information in the data collection forms was used only for research purposes.

Methods

Data collection procedure

The study was conducted with the students studying in the midwifery and nursing departments (a total of 560 female students) of Kırklareli University School of Health between November 2016-June 2017. There are a total of 560 female students studying at Kırklareli University School of Health midwifery and nursing departments. 480 midwifery and nursing students who agreed to participate in the study and were present in the school on that day Descriptive Information Form, MSQ, and VAS were applied. The students were divided into three groups mild, moderate and severe with the simple random draw method (using a simple table of random numbers) according to their scores from the pain scale and MSQ. Then, the students in both first and second groups were assigned to experimental and control groups homogeneously (Figure 1, Table 1). During the study, the menstruation times of the students in the experimental and control groups were recorded by the researcher by interviewing them one by one. The researcher then talked to the students on the phone every month near their menstruation times. The students who had pain after the menstruation were invited to the clinical skills laboratory located in Kırklareli University School of Health for the application. The severity of pain before the application was evaluated using VAS.

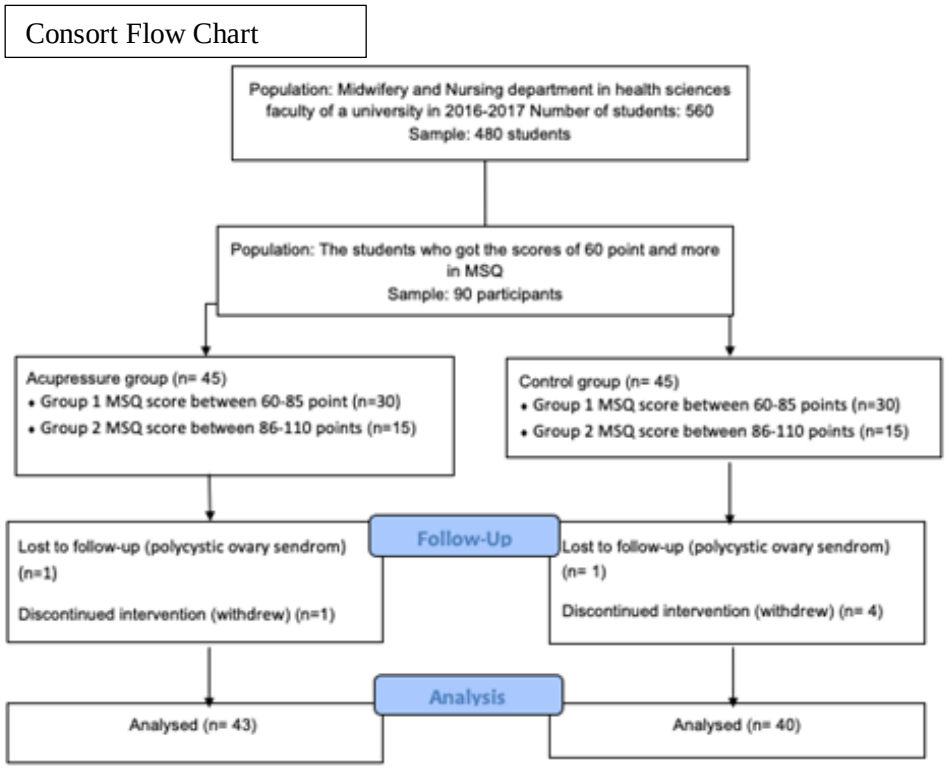

Figure 1. Diagram showing the recruitment of students and progression throughout the trial.

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Table 1. MSQ score table of the experimental and control groups

Scale	Groups		Pain Scores	N	Losses	Total number of cases
MSQ	Experimental group	Group 1	60-85	30	-	43
		Group 2	86-110	15	2	
	Control group	Group 1	60-85	30	1	40
		Group 2	86-110	15	4	

Application steps of the experimental group

In a single menstruation period, each student was informed about the procedure before the application. The acupuncture points (LI4 and SP6 points) were found through a specially developed acupuncture point detector (Acumaster) (www.olusummedikal.com). The researcher used gloves during the procedure to prevent the transition of bioenergy. The application was made in a frequency that did not discomfort the individual, did not cause any pain, and had a calming effect. Prior the application, heating and preparing rubbing operation was applied for 30-45 seconds to each point. Then, a total of 10-minute application was conducted (120- second pressure and 30-second resting for each point) to the parallel points located on the lower and upper extremities.

Application steps of the control group

They were allowed to rest for ten minutes without performing any intervention in the same environment as the experimental group. VAS was administered separately to the experimental and control groups for each evaluation after the application and the results among the groups were evaluated (before the procedure=VAS 1, post-procedure 1st minute =VAS 2, post-procedure 30th minute =VAS 3, post-procedure 60th minute = VAS 4, and post-procedure 120th minute = VAS 5).

Statistical analysis

For data analysis, the SPSS 22.0 software (SPSS, Inc., Chicago, IL, USA) was used. Number, percentage, mean, and standard deviation were given in descriptive statistics, Chi-square test, independent samples t-test, and Bonferroni analysis were used. The statistical significance level was accepted as $p<.05$.

RESULTS

It was determined that there was no statistically difference between the distributions of the students' descriptive properties (such as age, BKI, use of cigarette and alchol sitatus, menarche age, menarche pain age, menstruation period) ($p>0.05$, Table 2, Table 3).

Table 2. Descriptive properties related to experimental and control group.

Properties	Experiment Group (n: 43)		Control Group (n: 40)		χ^2	p
	S	%	S	%		
Age						
18-20 ages	29	67.4	19	47.5	2.611	0.106^{Y}
21-25 ages	14	32.6	21	52.5	(sd: 1)	
BMI						
Weak	7	16.3	10	25.0	1.405	0.495
Normal	31	72.1	24	60.0	(sd: 2)	
Overweight	5	11.6	6	15.0		
Cigarette						
Smoking	8	18.6	7	17.5	0.000	1.00^{Y}
Not-smoking	35	81.4	33	82.5	(sd: 1)	
Alcohol use						
Yes	3	7.0	4	10.0		0.706^{F}
No	40	93.0	36	90.0		

Y: Since the observed number was <25, Yates corrected chi-square test was performed.
F: Since the observed number was <5, Fisher's Exact Test was conducted

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Table 3. Menstruation and dysmenorrhea properties related to experimental and control group

Properties	Experiment Group (n: 43)		Control Group (n: 40)		t	P
	Min-Max	$\bar{x}$ ±SS	Min-Max	$\bar{x}$ ±SS		
First menstruation age(year)	12-17	13.65±1.17	11-17	13.28±1.26	1.408	0.163
First menstruation pain age	12-18	14.28±1.62	12-20	14.18±2.00	0.261	0.795
Severity of menstrual pain felt in the last 6 months	5-10	6.81±1.48	5-10	7.18±1.55	1.130	0.262
	S	**%**	**S**	**%**	χ^2	**P**
Menstruation period						
0-3 days	1	2.3	4	10.0	2.222	0.329
4-6 days	28	65.1	23	57.5	(sd: 2)	
7-10 days	14	32.6	13	32.5		
Menstruation cycle						
21-28 days	29	67.4	24	60.0	0.227	0.634[Y]
29-32 days	14	32.6	16	40.0	(sd: 1)	
Number of pads changed per day during menstruation						
2-3 pads	20	46.5	18	45.0	0,000	1.00 [Y]
4-20 pads	23	53.5	22	55.0	(sd: 1)	
Time to start pain before menstruation						
Before 24 hours	30	69.8	33	82.5	1.207	0.272 [Y]
Before 25-48 hours	13	30.2	7	17.5	(sd: 1)	
Dysmenorrhea resume time						
18-48 hours	31	72.1	28	70.0	0.000	1.00 [Y]
49-72 hours	12	27.9	12	30.0	(sd: 1)	
Dysmenorrhea status be in mothers/sisters						
Yes	28	65.1	19	47.5	1.950	0.105 [Y]
No	15	34.9	21	52.5	(sd: 1)	

t: Independent samples t-test, sd: 81
Y: Since the observed number was <25, Yates corrected chi-square test was performed.

The students in the study stated that they felt pain in the abdomen, inguinal, and waist region mostly before menstruation and they felt pain in abdominal and inguinal areas during menstruation. It was determined that the chilling statuses of the students before or during the menstruation increased their pain. The students in the experimental and control groups could not go to school and their social activities were prevented due to dysmenorrhea. The students used mostly hot application and analgesic drugs among non-pharmacological and pharmacological methods to relieve menstrual pain (Table 4). According to the mean scores of the students in the experimental and control groups for MSQ and its subscales, it was found that there was no statistically significant difference between the groups in terms of the students' MSQ total score and mean scores of the subscales negative affect/somatic complaints, menstrual pain symptoms, and coping methods subscale ($p>0.05$, Table 5).

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Table 4. Experimental and control group areas where they feel pain, problems related to dysmenorrhea and the methods used to relieve pain

Variables	Experiment Group (n: 43)		Control Group (n: 40)	
	n	%	n	%
Region and Period*				
Before Menstruation				
Abdomen	18	41.9	17	42.5
Spoon	22	51.2	18	45.0
Waist	18	41.9	20	50.0
Others (leg, back, pelvic, head, stomach)	13	30.2	7	17.5
During Menstruation				
Abdomen	27	62.8	25	62.5
Spoon	19	44.2	23	57.5
Waist	10	23.3	14	35.0
Others(leg/back/pelvic/head/stomach)	7	16.3	5	12.5
Before menstruation or during, pain increasing status*				
Chills	38	88.4	36	90.0
Others (Standing/fatigue/stress)	4	9.3	2	5.0
No pain enhancing factor	3	7.0	4	10.0
Problems outside dysmenorrhea*				
Nausea	25	58.1	16	40.0
Weakness	15	34.9	22	55.0
Diarrhea	14	32.6	13	32.5
Vomiting	24	55.8	4	10.0
Depression	22	51.2	-	-
Others (headache/dizziness/tension/ constipation /perspiration)	6	14.0	16	40.0
Methods for pain relief*				
Hot application	34	79.1	31	77.5
Pain relievers	33	76.7	25	62.5
Herbal teas	18	41.9	19	47.5
Massage	9	20.9	17	42.5
Relaxation exercises	6	14.0	6	15.0
School absenteeism during menstruation				
Yes (1 day)	23	53.5	12	30.0
No	20	46.5	28	70.0
Prevention of social activities during dysmenorrhea				
Yes, prevention	33	76.7	26	65.0
No	10	23.3	14	35.0

* More than one zone option is marked.

The students with moderate and high MSQ score
When the dysmenorrhea mean scores of the students in the experimental and control groups were compared, it was determined that there was no significant difference between the menstruation pain mean scores of the groups before and right after the procedure (1st minute) ($p>0.05$, Table 6). Dysmenorrhea mean scores of the students in the experimental group with moderate MSQ score at the post-procedure 30th, 60th and 120th minutes were found to be very low compared to the control group ($p<0.001$, Table 6). Dysmenorrhea mean scores of the students in the experimental group with high MSQ scores at the post-procedure 30th and 60th minutes were statistically at an advanced level while their score averages at the 120th minute were found to be lower at a very advanced level compared to the control group ($p<0.001$, Table 6).

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Table 5. Comparisons of mean scores of MSQ and it comparison of the averages of sub-dimensions

MSQ ve Sub-dimensions		Experiment Group (n: 43)	Control Group (n: 40)	t	P
		$\bar{x} \pm SS$	$\bar{x} \pm SS$		
MSQ Total Score		3.46±0.43	3.37±0.45	0.918	0.361
Sub-dimens	Negative effects / somatic complaints	3.30±0.55	3.21±0.59	0.745	0.458
	Menstrual pain symptoms	3.84±0.57	3.85±0.65	0.064	0.949
	Methods of coping	3.40±1.06	3.13±1.07	1.115	0.268

t: Independent samples t-test, sd: 81

As a result of the advanced analysis, the dysmenorrhea means a score of the experimental group which was the highest before the procedure started to gradually decrease after the procedure and reached the lowest level at 120th minute ($p<0.001$, Table 6). It was found that the pain means a score of the control group right after the procedure was significantly low ($p<0.05$) compared to the other measurements and there was no significant difference between the other binary measures ($p>0.05$, Table 6).

When the dysmenorrhea levels of groups with high MSQ scores by the time were evaluated with Bonferroni advanced analysis, it was found that there was no significant difference between the pain mean scores of the experimental group only at the 30th and 60th minutes ($p>0.05$); whereas, there was a significant difference between the pain mean scores in the other binary measurements ($p<0.05$) and the pain scores gradually decreased. It was determined that the pain mean scores of the control group right after the procedure was significantly lower than the values obtained at the post-procedure 30th, 60th, and 120th minutes ($p<0.05$, Table 6), and there was no significant difference between the other binary time periods ($p>0.05$, Table 6).

Table 6. Comparisons of mean scores of dysmenorrhea according to time and MSQ level of the experimental and control group

MSQ Score	Time period	Experiment Group (n:43)	Control Group (n:40)	Test	p
		$\bar{x} \pm SS$	$\bar{x} \pm SS$		
2.51-3.75 score (Middle)	Before the transaction [1]	6.50±1.04	6.24±0.99	t: 0.978	0.332
	Immediately after the transaction (1st minute)[2]	5.03±1.73	5.69±1.28	t: 0.1649	0.105
	30th minute[3]	3.90±1.71	6.21±1.15	t: 6.069	**0.000**
	60th minute[4]	2.80±2.01	6.48±1.12	t: 8.737	**0.000**
	120th minute[5]	1.13±1.33	6.55±1.27	t: 15.980	**0.000**
	Test	*F: 81.124*	*F: 3.770*		
	p	***0.000***	***0.016***		
	Difference	*1>2>3>4>5*	*2<4,5*		
3.76-5.0 score (High)	Before the transaction [1]	6.92±1.26	6.45±0.69	U: 54.0	0.290
	Immediately after the transaction (1st minute) [2]	5.08±2.36	5.45±1.37	U: 64.0	0.658
	30th second[3]	3.46±2.47	6.55±1.13	U: 22.0	**0.004**
	60th second[4]	3.00±2.35	6.45±1.29	U: 16.0	**0.001**
	120th second[5]	1.62±1.56	7.00±1.26	U: 0.0	**0.000**
	Test	*χ^2: 46.393*	*χ^2: 17.443*		
	p	***0.000***	***0.002***		
	Difference	*1>2>3,4>5*	*2<1,3,4,5*		

F: Analysis of variance in repeated measures, sd: 4 (advanced analysis: Bonferroni test $\chi 2$: Friedman test, sd: 4 (advanced analysis: Bonferroni corrected Wilcoxon test t: Independent samples t-test, sd: 57 U: Mann Whitney U test

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DISCUSSION

Primary dysmenorrhea is a common gynecological problem seen in women of reproductive age. Drug use is one of the most commonly used methods by individuals to reduce dysmenorrhea and enhance the quality of life. These drugs can cause many side effects (abdominal pain, nausea, etc) in women with dysmenorrhea. Acupressure, one of these methods, strengthens the immune system by activating the release of many chemicals into the blood. Thus, it increases the energy in the body and decreases the pain[5,10,20].

This study's results showed that the majority (57.8%) of the participating students were aged 18–20 years old, had a normal BMI, and did not smoke or drink alcohol, which is similar to results from national and international studies [4,5,21-25]. The reported menarche age, menarche pain age, and dysmenorrhea according to the students' VAS scores were also similar to extant studies [21-23,25-29], as were the students' menstruation period, menstrual cycles, and their pain before menstrual bleeding [20,25,29-30]. The majority of students with primary dysmenorrhea in the study reported that they felt pain mostly in the abdominal, inguinal, and waist regions before and during menstruation, chilling increased the pain more, and they had complaints such as nausea, fatigue, vomiting, and depression along with the pain. The menstrual symptoms in the study are similar to the national and international literature [20,27,30-32].

When the literature is examined, risk factors for dysmenorrhea include dysmenorrhea in family history[3]. In the study, the students with primary dysmenorrhea were found to have menstruation pain complaints in their mother/sister. The results are compatible with the study results[31,33-35].

Women prefer pharmacological and non-pharmacological treatment methods such as analgesics, hot application, acupressure, herbal teas, and massage while coping with primary dysmenorrhea[3]. When the results of the literature and the present study are examined, it is remarkable that especially the use of analgesics is common[32,35-37]. Considering the fact that the young girls of reproductive age and their families do not have adequate information about the non-pharmacological agents, their side effects, and the toxic effects that may occur later, it is important that midwives provide training to the young girls with primary dysmenorrhea and their families about non-pharmacological methods especially by using social media and press, organizing seminars in schools and public education centers.

In the literature, it is known that people with dysmenorrhea history have school absences and interrupted social activities during their menstrual period [3,5-6,8]. It was determined in this study that the students could not go to school during their menstrual period and their social activities were interrupted during dysmenorrhea. Similar results were found in the studies[14,27,30,38].

In the study, the effect of acupressure application on primary dysmenorrhea was evaluated five times using VAS. When the menstrual pain mean scores of the groups with moderate and high Menstruation Symptom Questionnaire scores were evaluated separately according to time of each measurement, no significant difference was found between the pain mean scores of the groups from VAS 1 and VAS 2. It was an expected result that there was no difference between the groups in the first pain evaluation conducted in both groups before the application (VAS 1). Right after the application (VAS 2), the result was not significant although there was a decrease in dysmenorrhea in both groups. The reason behind why there was no significant difference in pain reduction was that the students in the control group were only resting with music and the effect of acupressure did not start immediately in the experimental group. In the acupressure group, the regulation of blood flow, the activation of the release of chemicals in the blood, the acceleration of the transmission of electromagnetic signals, and thus energy increase in the body take time [5,7,8,10,11,12]. If the effect happened immediately, it might have been thought that this was not caused by the effect of acupressure but by the effect of resting with music and being touched and cared for during the application and thus the pain decreased psychologically. In similar studies, it has been determined that there is no statistically significant difference in the pain levels of the experimental and control groups in the evaluations made with VAS before and right after the application.

In the study, when the menstrual pain mean scores of the groups with moderate and high Menstruation Symptom Questionnaire scores were evaluated in terms of each measurement time, it was determined that the menstrual pain mean score of the experimental group in VAS 3, VAS 4 and VAS 5 after the acupressure applied at the LI4 and SP6 acupuncture points was significantly lower at very advanced level compared to the control group. In

similar studies, while acupressure was applied only to SP6 points for 20 minutes, acupressure was applied to other acupuncture points along with the LIV4 point for 20 minutes in some studies, and dysmenorrhea was determined to decrease [5,14,20,39-41]. Although the application points were a lot (LI4 and SP6) and the application time was less (pressure was applied to four points for a totally of 10-12 minutes) in the study, VAS scores were obtained at the post-procedure 30th, 60th, and 120th minutes are in parallel with the study results. It can be thought in the study that applying pressure with the same intensity manually in a short time is effective in the reduction of pain.

Limitations

Limitations of the study are that it took a long time to establish a trusting environment due to the beliefs and attitudes of the students towards the non-pharmacological processes, some students wanted to withdraw from the application during the study and there was a loss of cases in the study because some students were referred to the doctor because of their very severe pain and they were diagnosed with polycystic ovarian as a result of the examination accompanied by ultrasound.

CONCLUSION

Although the results of the present study are similar to the other study examples, the interviews made with the students after the study also showed that acupressure application decreased the pain, medication needs, and school absences of the students with primary dysmenorrhea during the menstrual period. Besides, it can be asserted that acupressure is an effective, easy, and inexpensive method to cope with menstrual pain.

Although there are studies in the literature indicating that acupressure is frequently used in reducing birth pain, it is particularly remarkable that the studies stating that acupressure reduces primary dysmenorrhea have not been conducted in Turkey. It is important that midwives follow non-pharmacological treatment methods for the promotion and maintenance of women's health which are among their duties, powers, and responsibilities, receive training about them, apply to the individuals who apply with the complaint of primary dysmenorrhea, and teach these applications to the people when necessary. We believe that the results of this study are important in terms of being guiding in closing the current gap.

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