

EFFECTIVENESS OF PEER GROUP SUPPORT IN THE APPLICATION OF ACUPRESSURE AND ABDOMINAL STRETCHING ON MENSTRUAL PAIN IN ADOLESCENT FEMALES WITH THE SELF DETERMINATION MODEL

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Abstract

Background: One of the changes that appears in adolescent daughters is menstruation. One way to reduce menstrual pain is to use relaxation techniques, acupressure, and abdominal stretching. Another way is to help teenagers deal with pain by using group methods, such as peer group support. The purpose of this study was to determine the relation between Peer Group Support in the application of acupressure and abdominal stretching to menstrual pain in adolescent girls using the self-determination model approach.

Methods: This study used a quasi-experimental design with a pre-test and post-test design. The sampling technique used was simple random sampling. Inclusion criteria were respondents who had menstruated, experienced menstrual pain, aged at menarche between ≤ 12 years to ≥ 14 years, and had a menstrual duration of 7 days, as well as being cooperative and willing to be a respondent. The sampling technique used was simple random sampling. The sample size was 70 female adolescent respondents.

Results: The results of the study with Paired t-test showed that the Acupressure and Abdominal Stretching intervention groups both experienced changes with a value of $p = 0.03$ in the Acupressure and Abdominal Stretching groups and $p = 0.000$. On average, there was an increase in overcoming menstrual pain, but in the Acupressure group, there was only a slight increase in the t-count, which was 2.45. In the abdominal stretching group, the t-count value was greater, at 11.16.

Conclusion: The published research shows that acupressure and abdominal stretching were also carried out on the same group in the 2 intervention groups. The results were effective and could be carried out together, as evidenced by a decrease in the level of pain during menstruation and self-determination.

Keywords: Abdominal Stretching, Acupressure, Self-Determination Model, Menstrual Pain, Peer Group Support

INTRODUCTION²⁵

Adolescence is a transition period from childhood to adulthood marked by accelerated physical, mental, emotional, and social development. The earliest changes that appear are biological developments, one of the signs of which is the start of menstruation in adolescence⁶⁴. A person's menstruation occurs during puberty and the part of women to conceive children or the reproductive period. Menstruation usually begins between the ages of 10 - 16 years, depending on various factors, including women's health, nutritional status and body weight relative to height. During menstruation, it is usually accompanied by symptoms such as sweating, headaches, diarrhea and vomiting (Tsamara et al., 2020). Menstruation is a physiological change in the body in women that occurs periodically and is influenced by reproductive hormones. Menstruation is often accompanied by dysmenorrhea (pain during menstruation) because during menstrual pain there is an increase in prostaglandins (substances that cause the uterine muscles to contract). In the past, dysmenorrhea was considered a psychological problem or an unavoidable aspect of femininity, but now doctors know that dysmenorrhea is a real medical condition (Windastiwi et al.⁴⁹ 2017). Before and during menstruation, women often experience discomfort in the lower abdomen. The presence of uterine contractions during menstruation causes pain during the menstrual cycle, because the tightening of the uterus will prevent blood from flowing smoothly to the uterine wall. The nature and level of pain during menstruation vary, from mild pain to severe pain. ²⁹ condition is called dysmenorrhea which is a symptomatic phenomenon including abdominal cramps, back pain, and gastrointestinal symptoms such as nausea and diarrhea can occur⁴⁷ as symptoms of menstrual pain (Fatmawati et al., 2021).

Based on 2020 World Health Organization (WHO) data, the incidence of dysmenorrhea are 1,769,425 (90%) women who suffer

dysmenorrhea, with 10-16% suffering dysmenorrhea heavily (Syaiful & Naftalin, 2018). From Riskesdes data The 2018 Indonesian Ministry of Health showed that from prevalence of teenage daughters in Indonesia who are reproductive namely those aged 10-24 years is as many as 256,598 people experienced painful period or dysmenorrhea, indicating sufferer painful period or dysmenorrhea around 50-60% consisting of 50.48% primary dysmenorrhea and ⁴ 36% secondary dysmenorrhea secondary. In East Java the number of teenager reproductive daughter namely those aged 10-24 years is amounting to 156,598 people, while those who experienced dysmenorrhea as many as 100,024 (59.89%) and came get a share midwifery amounting to 56,565 people (41.31%) (Retno Gumelar et al., 2022).

The highest prevalence of menstrual pain is often found in female adolescents, which is estimated to be between 20-90% (Salsabila Putri et al., 2023). According to research by Arini Purnama Sari & Arifah Usman (2021), acupressure therapy was carried out at the LI 4 (hegu) and ST 36 bilateral pressure points 30 times for 3 consecutive days during menstruation (Sari & Usman, 2021). Data analysis using the Wilcoxon test. The results of the study showed a decrease in the quality of dysmenorrhea pain, namely before therapy, it was 2.67 and SD 0.687, while after acupressure therapy for 3 consecutive days, the average results of dysmenorrhea pain intensity were 1.19 and SD 0.552. ⁶⁰ results of the Wilcoxon test obtained an average decrease in the intensity of dysmenorrhea pain on day 1, namely 0.22, day 2, namely 0.43 and day 3, namely 0.83 with a P-value=0.00, which means that acupressure therapy at points LI 4 (Hegu) and ST 36 bilaterally is effective in reducing dysmenorrhea in adolescents (Sari & Usman, 2021).

There are two ways to reduce menstrual pain, namely pharmacological and non-pharmacological. Pharmacological methods by taking medication and non-pharmacological

methods can be done with warm compresses or warm baths, massage, physical exercise, adequate sleep, distractions such as listening to music and relaxation such as yoga (Syaiful & Naftalin, 2018). Acupressure is known as one of the traditional Chinese therapy methods as an alternative to curing menstrual pain by using the technique of massaging the meridian points at points L 14 and ST 36 effectively reducing menstrual pain. Fingers can stimulate the release of endorphins which relax muscles and reduce pain. Determining the right meridian points is also needed so that therapy is more effective (Sari & Usman, 2021). Acupressure therapy is a complementary therapy whose methods and benefits are not widely known, so socialization and training are needed. Abdominal stretching is a muscle stretching exercise, especially in the abdomen, which is done for 10-15 minutes. The purpose of this exercise is to increase muscle strength, endurance, and flexibility so that it is expected to reduce menstrual pain. Abdominal stretching can increase endorphin levels so that it can act as a short-term specific analgesic to reduce pain (Ardiani & Sani, 2020).

Peer group support or peers are an influence on a person's motivation even though someone has a low education (Khamida et al., 2019). The results of research in developmental psychology have shown that peer group support groups are the main groups as a medium for socialization during adolescence, interacting in peer groups, communication media that discuss sexual changes and reproductive processes that occur so that they create communicative interactions that contribute to shaping knowledge and attitudes regarding reproductive health issues and gender compared to having to communicate to parents, family, teachers or health workers (Maringga & Ivantarina, 2023). So that it can help adolescents to interact gradually and help adolescents to express their feelings in this case adolescents who experience menstrual pain.

By looking at the complexity of menstrual pain problems experienced by adolescent girls

that are safe using non-pharmacological techniques so that they can be done independently, the researcher is interested in researching the Effectiveness of Peer Group Support in Applying Acupressure and Abdominal Stretching to Menstrual Pain in Adolescent Girls with the Self-Determination Model.

38 METHODS Study Design

This study used a quasi-experimental design with a pre-test and post-test design, of one group without a control group.

Setting

This study provided treatment to 2 treatment groups, namely 1 group was given acupressure treatment, and 1 group was given abdominal stretching treatment in adolescent girls with menstrual pain. This study did not use a control group. In dividing the groups, it will be assisted by team members consisting of 2 lecturers and assisted by enumerators. Each group consists of 1 lecturer and 2 enumerators.

14 Sample

The sampling technique used is simple random sampling. The inclusion criteria in this study were female adolescents living in Ujung Village and Pegirian Village, Semampir District who had menstruated, experienced menstrual pain, menarche age ranged from ≤ 12 years to ≥ 14 years, and had a menstrual duration between < 3 days to > 7 days, and were cooperative and willing to be studied. Female adolescents were invited randomly and were willing to attend the initial meeting with the researcher. The sample size that met the researcher's criteria was 70 female adolescent respondents. This study was conducted in August from 1 to 31 August 2024.

8 Instruments

The instrument in this study was a questionnaire (descriptive data) to start the research and then divided into 2 large groups,

namely the group with the Acupressure technique and the Abdominal Stretching technique to measure menstrual pain in female adolescents who had become respondents.

1. Demographic data instruments

The instruments used include demographic data and information about menstruation. From the demographic data, the information obtained is education, duration of menstruation and age of menarche.

2. Acupressure Techniques and Abdominal Stretching Techniques

a. Acupressure Technique

Massage the Sanyinjiao Point (SP6) on the 4 fingers above the internal malleolus or right at the end of the shin, the Hegu Point (LI4) between the base of the thumb and index finger, right in the muscle area, and the Taichong Point (LR3) is in the soft part between the big toe and the second toe on the foot. The massage is done for 3-5 minutes by rotating counterclockwise 30 times. This technique is done to suppress the production of endorphins in the body so that it can control the activity of the endocrine glands that stimulate the nervous system and can suppress pain and external stimuli (Sari & Usman, 2021).

b. Abdominal stretching technique

Abdominal Stretching exercises are done 3 days before menstruation every morning or evening with a frequency of three times a week for 30 minutes for 10-15 minutes. There are 22 stages of abdominal stretching, namely Cat Stretch, Lower Trunk Rotation, Buttock/Hip Stretch, Abdominal Strengthening Curl Up, Lower Abdominal Strengthening, The Bridge Position, every stages, done for 20 seconds (Ardiani & Sani, 2020).

c. Visual Analogue Scale (VAS)

Assessment of menstrual pain using a universal instrument used in pain assessment, namely the Visual Analogue Scale (VAS). The VAS consists of ten scales that indicate the degree of pain where the number 0 indicates no pain and a scale of 10 indicates very severe and unbearable pain.

Data Analysis

Data processing using statistical test, namely the Wilcoxon test. Multivariate analysis methods that can be used to describe the relationship between variables.

Ethical Consideration

Before carrying out the research, the researcher carried out initial permission by sending a letter or asking for a recommendation from the Surabaya City Investment and One Stop Integrated Services Service (DPMPTSP) with number: 500.16.7.4/2727/S/RPM/436.7.15/2024, and the research was carried out.

RESULTS

This research was conducted in Semampir District covering 2 villages, namely Ujung Village and Pegirian Village, Surabaya, with a total of 70 respondents. 1 village includes 35 respondents to be studied. Respondents selected by the researcher were teenage girls who had menstruated, experienced menstrual pain, were cooperative and willing to be studied. The research media were in the form of education, questionnaires and booklets that the researcher provided.

A. General Data

General data in this study include age of menarche, education and duration of menstruation.

1. Age Menarche

Table 1. Distribution Frequency Respondents Based on Age Menarche

Age Menarche (year)	Group Acupressure		Group Abdominal Stretching		Amount	
	N	%	N	%	N	%
≥14 years	3	8.6	8	22.9	11	15.7
≤12 years	18	51.4	9	25.7	27	38.6
12-14 years	14	40	18	51.4	32	45.7
Total	35	100	35	100	70	100

Table 1 shows No There is difference significant to age moment menarche between group Acupressure and groups Abdominal Stretching , namely part big respondents in the study This be in a group age menarche 12-14 years , namely 14 respondents (40%) in the

group Acupressure and 18 respondents (51.4%) in the group Abdominal Stretching.

14 Education

Table 2. Frequency Distribution of Respondents Based on Education

Education	Group Acupressure		Group Abdominal Stretching		Amount	
	N	%	N	%	N	%
Elementary School/ Equivalent	13	37.1	3	8.6	16	22.9
Junior High School/ Equivalent	14	40	27	77.1	41	58.5
High School/ Equivalent	8	22.9	5	14.3	13	18.6
Total	35	100	35	100	70	100

Table 2 shows No There is difference between group Acupressure and groups Abdominal Stretching, that is part big respondents in the study This own level education last junior high school/equivalent namely 14 respondents (40%) in the group Acupressure and 27 respondents (77.1%) in the group Abdominal Stretching.

3. Menstrual Duration

Table 3. Frequency Distribution of Respondents' Menstrual Duration

Menstrual Duration	Group Acupressure		Group Abdominal Stretching		Amount	
	N	%	N	%	N	%
> 7 days	12	34.2	6	17.1	18	25.7
< 3 days	8	22.9	5	14.3	13	18.6
3-7 days	15	42.9	24	68.6	39	55.7
Total	35	100	35	100	70	100

Table 3 shows No There is difference significant on the length of menstruation between group Acupressure and groups Abdominal Stretching, namely part big respondents in the study this was in the 3-7 day period, namely 15 respondents (42.9%) in the group Acupressure and 24 respondents (68.6%) in the group Abdominal Stretching.

B. Special Data

Specific Data is observational data obtained from research.

1. Pain Levels of Adolescent Girls Experiencing Menstrual Pain in 2 Groups

Table 4. Data on the Results of Calculating the Menstrual Pain Scale Values before and After Intervention in the Acupressure Group and the Abdominal Stretching Group

Pain Level	Group Acupressure				Group Abdominal Stretching			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
No Pain	0	0	2	5.7	0	0	12	34.3
Mild Pain	18	51.4	26	74.3	13	37.1	10	28.6
Moderate Pain	13	37.2	7	20	15	42.9	12	34.3
Severe Pain	4	11.4	0	0	7	20	1	2.8
Total	35	100	35	100	35	100	35	100
Wilcoxon Test Results	p=0.000							

Table 4 shows the results of pre and post respondents after being given intervention in the Acupressure group and the Abdominal Stretching group. There was a significant increase after the intervention in the Acupressure group who did not experience pain, there were 2 respondents (5.7%), 26 respondents (74.3%) were at a mild pain level and 7 respondents (20%) were at a moderate pain level. Meanwhile, the intervention that had been implemented in the Abdominal Stretching group found that 12 respondents (34.3%) were at a no-pain level, 10 respondents (28.6%) were at a mild pain level, 12 respondents (34.3%) were at a moderate pain level and 1 respondent (2.8%) was at a severe pain level. The result of P-Value = 0.000 so it can be concluded that H₀ is rejected and H₁ is accepted, so there is an effect of giving intervention to the 2 groups that the researcher gave.

2. Peer Group Support Value 2 Groups

Table 5. Peer Group Support Value Calculation Results Data Before and after Given Interventions in Groups Acupressure and Group Abdominal Stretching .

Peer Group Support	Group Acupressure				Group Abdominal Stretching			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
Always	10	28.6	20	57.1	11	31.4	13	37.1
Often	10	28.6	12	34.4	12	34.3	17	48.6
Sometimes	12	34.3	3	8.5	8	22.9	5	14.3
Never	3	8.5	0	0	4	11.4	0	0

Total	35	100	35	100	35	100	35	100
Wilcoxon Test Results	p=0.000							

Table 5 shows results Peer Group Support for pre and post respondents given intervention in groups Acupressure and groups Abdominal Stretching. There was a significant increase after the intervention in the Acupressure group, the results obtained were 20 respondents (57.1%) were in the always value, 12 respondents (34.2%) were in the often value, and 3 respondents (8.5%) were in the sometimes value. Meanwhile, the intervention that had been implemented in the Abdominal Stretching group obtained 13 respondents (37.1%) were in the always value, 17 respondents (48.6%) were in the often value, and 5 respondents (14.3%) were in the sometimes value. The result of P-Value = 0.000 so it can be concluded that H₀ is rejected and H₁ is accepted, so there is an effect of giving intervention to the 2 groups that the researcher gave.

3. Motivational Values 2 Groups in Peer Group Support

Tabel 6. Motivation Value Calculation Result Data Teenage Girls Before and After Given Interventions in Groups Acupressure and Group Deep Abdominal Stretching Peer Group Support.

Motivation	Group Acupressure				Group Abdominal Stretching			
	Pre		Post		Pre		Post	
	N	%	N	%	N	%	N	%
Yes	14	40	16	45.7	22	62.9	24	68.6
No	21	60	19	54.3	13	37.1	11	31.4
Total	35	100	35	100	35	100	35	100
Wilcoxon Test Results	p=0.000							

Table 6 shows the results of motivation in female adolescents in pre and post-respondents after being given intervention in the Acupressure group and the Abdominal Stretching group. After the intervention in the Acupressure group, the results showed that 16 respondents (45.7%) were in the yes value, and 19 respondents (54.3%) were in the no value.

Meanwhile, the intervention that had been implemented in the Abdominal Stretching group found that 24 respondents (68.6%) were in the yes value, and 11 respondents (31.4%) were in the no value.

The result of P-Value = 0.000 so it can be concluded that H₀ is rejected and H₁ is accepted, so there is an effect of giving intervention to the 2 groups that the researcher gave.

4. Analysis Univariate Per Variable

Tabel 7. Test Statistic Data Per Variable Study

Z	Test Statistics ^a					
	Post Test Acupressure - Pre Test Acupressure	Post Test Abdominal Stretching - Pre Test Abdominal Stretching	Post Test Acupressure Peers Group Support - Pre Test Acupressure Peers Group Support	Post Test Abdominal Stretching Peers Group Support - Pre Test Abdominal Stretching Peers Group Support	Post Test Acupressure Motivation - Pre Test Acupressure Motivation	Post Test Abdominal Stretching Motivation - Pre Test Abdominal Stretching Motivation
	-3.771 ^b	-4.811 ^b	-5.000 ^b	-3.606 ^b	-3.414 ^b	-3.414 ^b
Asymp. Sig. (2-tailed)	.000	.000	.000	.000	.000	.000

a. Wilcoxon Signed Ranks Test
b. Based on negative ratings

Table 7 shows before data analysis, before the normality test is carried out, the data is normally distributed if the significance count (z) is greater than the significance value of 0.05. The data above can be concluded that the data above shows an Asymp Sig value (2-tailed) of 0.00 or <0.05, then H₁ is accepted.

5. Peer Group Support Value Against 2 Groups With Self-Determination Model

5.1 Analysis Paired T-Test

Tabel 8. Peer Group Support before and after given Intervention In Group Acupressure and Groups Abdominal Stretching on Menstrual Pain with Self Determination Model

Group Respondents	Peer Group Support		95%CI	T	p*
	Pre (Mean ±SD)	Post (Mean ±SD)			
Group Acupressure	28.1±10.45	31.25±10.04	-6.62±-0.28	2.45	0.03
Group Abdominal Stretching	22.55±12.79	47.6±11.57	-30.33±-22.57	11.16	0,000

*p<0.5 Based on t-test 44

Table 8 shows based on The results of the Paired T-Test statistical test were obtained obtained Group Acupressure and Groups Abdominal Stretching You're welcome experience changes , namely p=0.03 (p<0.05) in Group Acupressure and p=0.000 (p<0.05) in Group Abdominal Stretching , so can concluded that there is change in a way significant on compliance Respondent before and after given intervention on both group This is also proven with mark mean 95% CI on both group that does not involving number 0, then the result stated meaningful. However, the intervention group experienced a greater increase compared to the control group, which was indicated by a t-value of 11.16.

5.2 Analysis Independent T-Test

Table 9 Difference Values Peer Group Support before and after given Intervention In Group Acupressure and Groups Abdominal Stretching Against Menstrual Pain with Self Determination Model

Peer Group Support t	Group Acupressure (Mean±SD)	Group Abdomina Stretching Mean±SD	Mean Difference	95% CI	p*
Difference Value	31.65± 10.03	47.6± 11.57	15.95	-23.71: -10.95	0.00

*p<0.5 Based on t-test

Table 9 shows that difference average changes to Peer Group Support before and after given Intervention in Group Acupressure and Groups Abdominal Stretching Against Menstrual Pain with the Self Determination Model, namely as big as 15.95 point 41. Statistical test results independent sample t-test obtained p-value=0.00 (p<0.05) so can concluded there is difference change Group Acupressure and Groups Abdominal Stretching Against Menstrual Pain in a way significant .

DISCUSSION

1. Identification of Pain Scale in Adolescents Experiencing Menstrual Pain Before and After Applying

Acupressure in Peer Group Support with Self Determination Model

The results of the study of respondents who underwent acupressure intervention showed that during the pre-test there were 4 respondents (11.4%) who experienced severe pain, after being given the intervention, no respondents experienced severe pain. This is in line with Sari & 49 man's opinion about acupressure showing that there was a decrease in the quality of menstrual pain before and after being given acupressure intervention for 10 consecutive days, the average result of menstrual pain intensity was 8 1.60 and SD 0.695 (Sari & Usman, 2021). The results of the researcher's analysis of 23 the acupressure intervention can be proven using the Wilcoxon matched pairs 1 test and the results of the Z count were -3.771 > t table and asymp sig. (2-tailed) 0.000 < α = 0.05, so it can be concluded that there is a significant effect of providing acupressure intervention on reducing menstrual pain.

According to the research data that has been described above, it shows that there is an influence of Peer Group Support on intervention in the Acupressure group in overcoming menstrual pain 8 in adolescent girls. This is evidenced by the significant difference in the pre and post results, the post-intervention results obtained were 20 respondents (57.1%) were in the always value, 12 respondents (34.3%) were in the often value, and there was an increase in the sometimes value 7 from 12 respondents to 3 respondents (8.6%). This is in line with the results of research in developmental psychology which has shown that peer group support groups are the main groups as a medium for socialization during adolescence, interacting in peer groups, communication media that discuss sexual changes and reproductive processes that occur so that they cause communicative interactions that contribute to forming knowledge and attitudes regarding reproductive health issues. and gender compared to having to communicate to parents, 55 family, teachers and health worker (Khamida et al., 2019). The

results of the researcher's analysis of the acupressure intervention can be proven using the Wilcoxon matched pairs test and obtained the results of $Z \text{ count } -5,000 > t \text{ table and asymp sig. (2-tailed) } 0,000 < \alpha = 0,05$, so it can be concluded that there is a significant influence of Peer Group Support in providing acupressure intervention on reducing menstrual pain. The Self Determination Model is one model to motivate individuals to be better, so that they can overcome the problems that face. In the Acupressure intervention group, the pre and post test results showed changes. The results of the researcher's analysis of the acupressure intervention can be proven using the Wilcoxon matched pairs test and obtained the results of $Z \text{ count } -3,414 > t \text{ table and asymp sig. (2-tailed) } 0,000 < \alpha = 0,05$, so it can be concluded that there is an influence. The above is in accordance with the research conducted that peer support group intervention can reduce depression and improve psychosocial aspects, in addition Peer Group Support can also increase the motivation of each individual (Bond et al., 2019). In accordance with the above facts Peer Group Support, in adolescent girls who experience menstrual pain can feel togetherness with people who have the same conditions as themselves and know the solution to the problems experienced so that they can share the experiences of respondents (Novianti & Rusady, 2023).

2. Identification of Pain Scale in Adolescents Experiencing Menstrual Pain Before and After Implementing Abdominal Stretching in Peer Group Support with Self-Relief Model Determination

Abdominal stretching interventions also showed that during pre- test there were 7 respondents (20%) who experienced severe pain, after being given intervention there was only 1 respondent (2.9%) who experienced severe pain. This is in line with the research of Sutrisni & dkk, 2022; showing the mean results

before the intervention of 2.86 and the mean after the intervention of 1.12, while the standard deviation before the intervention was 0.697 and the standard deviation after the intervention was 0.145 which showed a decrease in the level of pain before and after the intervention (Sutrisni & dkk, 2022). In addition, according Women experience their first menstruation (menarche) at the age of 12-16 years (Salsabila Putri et al., 2023). This is almost in line with the results of the study where the age of menarche, most aged 12-14 years, namely 18 respondents (51.4%). The age limit for menarche is an early sign of the normal functioning or maturity of female reproductive organs. The duration of menstruation is also almost in line with the opinion namely the majority of respondents experience menstruation for 3-7 days as many as 24 respondents (68.6%) (Salsabila Putri et al., 2023). This is in accordance with the normal duration of menstruation. The results of this analysis were carried out using the Wilcoxon matched pairs test statistical test, obtaining a calculated Z result of $-4,811 > t \text{ table and asymp sig. (2-tailed) } 0,000 < \alpha = 0,05$, so it is concluded that there is a significant effect of abdominal stretching intervention on reducing menstrual pain.

According to the research data that has been described above, it shows that there is an influence of Peer Group Support on intervention in the Abdominal Stretching group in overcoming menstrual pain in adolescent girls. This is evidenced by the significant difference in the pre and post results, the post-intervention results obtained 13 respondents (37.1%) were in the always value, 17 respondents (48.6%) were in the often value, and there was an increase in the sometimes value from 8 respondents to 5 respondents (14.3%). This is in line with the results of research in developmental psychology which has shown that peer group support groups are the main groups as a medium for socialization during adolescence, interacting in peer groups, communication media that discuss sexual changes and reproductive processes that occur

so as to create communicative interactions that contribute to forming knowledge and attitudes regarding reproductive health issues, and gender compared to having to communicate to parents, family, teachers and health workers (Dewi, 2021). The results of the researcher's analysis of the abdominal stretching intervention can be proven using the Wilcoxon matched pairs test and obtained the results of Z count $-3.606 > |t|$ table and asymp sig. (2-tailed) $0.000 < \alpha = 0.05$, so it can be concluded that there is a significant influence of Peer Group Support in providing acupressure intervention on reducing menstrual pain. The Self Determination Model is one model to motivate individuals to be better, so that they can overcome the problems that arise. In the Abdominal Stretching intervention group, the pre and post test results showed changes. The results of the researcher's analysis of the Abdominal Stretching intervention can be proven using the Wilcoxon matched pairs test and obtained the results of Z count $-3.414 > |t|$ table and asymp sig. (2-tailed) $0.000 < \alpha = 0.05$, so it can be concluded that there is an influence. The above is in accordance with the research conducted that peer support group intervention can reduce depression and improve psychosocial aspects, in addition Peer Group Support can also increase the motivation of each individual (Bond et al., 2019). In accordance with the facts above, Peer Group Support, in adolescent girls who experience menstrual pain can feel togetherness with people who have the same conditions as themselves and know the solutions to the problems experienced so that they can share the experiences of respondents (Novianti & Rusady, 2023).

- Analyzing the Effectiveness of Peer Group Support in the Application of Acupressure and Abdominal Stretching on Pain Levels in Adolescent Girls Using the Self-Determination Model.

The results of the variable measurements showed that all respondents experienced an increase in overcoming menstrual pain in adolescent girls when given intervention in 2 groups through Peer Group Support with the Self Determination model. The results of the Paired t-test showed that the Acupressure group and the Abdominal Stretching intervention group both experienced changes with a value of $p = 0.03$ in the Acupressure and Abdominal Stretching groups and $p = 0.000$. On average, there was an increase in overcoming menstrual pain, but in the Acupressure group there was only a slight increase in the t count, which was 2.45. While in the Abdominal Stretching group the t count value was greater, which was 11.16. Group intervention formed group Peer Group Support with Self Determination Model for 10 days, which means Peer Group Support for teenagers daughter with Self Determination Model influential to painful menstruation. The results of data analysis with using the independent sample t-test obtained p value $= 0.00$ ($p < 0.05$), so can concluded that there is difference change painful menstruation in teenagers daughter moment given intervention in 2 groups through Peer Group Support with the Self Determination model in a way significant.

In line with the theory of Peer Group Support can reduce health behavior problems, improve psychosocial aspects. With the formation of a large Peer Group Support from fellow respondents at the problem clarification stage, various proposals and action plans in overcoming problems (Novianti & Rusady, 2023). The above is in accordance with the research conducted that peer support group interventions can reduce depression and improve psychosocial aspects, in addition Peer Group Support can also increase the motivation of each individual (Bond et al., 2019). In accordance with the facts above Peer Group Support, in adolescent girls who experience menstrual pain can feel togetherness with people who have the same conditions as themselves and know the solution to the

problems experienced so that they can share the experiences of respondents (Novianti & Rusady, 2023). Researchers argue that Peer Group Support can change health behavior. This is because by carrying out Peer Group Support on respondents who experience menstrual pain, they get support from fellow respondents so that their confidence in their ability to manage it increases. This can be proven by after being given Peer Group Support 10 days and a post-test was carried out and it was found that respondents experienced a decrease in dealing with menstrual pain. In addition, researchers assume that Peer Group Support can be used as a support system obtained from a group of people with the same problems to help minimize health behavior problems, improve psychosocial aspects, and increase motivation for change. Togetherness when carrying out this activity can increase motivation and foster interest and an attitude of compliance with disease management (Maringga & Ivantarina, 2023). The group is more directed towards the Peer Group Support group that was intervened (Dewi, 2021). Researchers stated that providing mutual support to each other, it will have a positive impact on each respondent.

CONCLUSION

From the results of the research that has been published, from the 2 intervention groups, acupuncture, and abdominal stretching were also carried out on the same group. The results were effective and could be carried out together, as evidenced by a decrease in the level of pain during menstruation and self determination.

Suggestions for future research are to provide a control group to obtain more optimal results.

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DECLARATION OF CONFLICTING INTEREST

The authors have no conflict of interest to declare.

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AUTHOR CONTRIBUTION

Rosari Oktaviana Mahundingan: Main author, conceptualization, methodology, analysis, and resources.

Dewi Andriani: Generates ideas, conceptualization, formal analysis, and data curation.

Dwi Yuniar Ramadhani: Validation, formal analysis, and data curation.

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