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Literature Review: The Effect of Acupressure on Menstrual Pain in Adolescents



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Abstract

Menstrual pain is a condition that bothers most women regardless of age, with the highest percentage being in their teens. Menstrual pain is categorized into mild, moderate, severe and very severe pain. Women who experience menstrual pain can interfere with their activities ranging from daily activities, school to work. One way to reduce menstrual pain non-pharmacologically is to use acupressure. This study aimed to determine the effect of acupressure on menstrual pain in adolescents. This was a literature Review with Systematic Mapping Study (Scoping Study) design. This study used journals published in the last 5 years. The ten journals used were obtained from the Google Scholar, PubMed and Scencedirect databases. The journals obtained had passed the selection based on the year of publication, the suitability of the title with keywords, the feasibility of the journal, the ability to access, duplication and inclusion criteria. The journal was then analyzed using the instrument of presenting the results of a literature review. The most widely used acupressure point was sanyinjiao (Sp 6) by pressing or massaging. The intensity of menstrual pain after being given acupressure was decreased, the average pain intensity decreased between before and after being given acupressure starting from a scale of 0.86 to 6.7. The results of the analysis of all journals show P value < a, which meant that there was a significant effect of giving acupressure on decreasing the intensity of menstrual pain in adolescents. Giving acupressure by pressing or massaging certain meridians can increase the levels of endorphins that are useful for reducing the intensity of menstrual pain in adolescents. Education about proper massage techniques will help reduce the level of pain that occurs during menstruation.

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INTRODUCTION

Menstruation is the periodic discharge of blood, mucus, and cellular debris from the uterus with regular cycles. Menstruation is a complex process, in which the process involves the involvement of various organs, the endocrine system, reproductive hormones and enzymes (Desiyani Nani, 2018). Menstruation is a normal event that occurs in adolescent girls and women of childbearing age. However, not infrequently in dealing with menstruation, there are many disturbances caused, such as menstrual pain or dysmenorrhea, anxiety disorders, drastic mood swings and vaginal discharge before and after menstruation (Eva Ellya Sibagariang et al., 2010).

The results of the 2013 World Health Organization (WHO) survey showed that more than 80% of women of childbearing age experienced dysmenorrhea during menstruation, and 67.2% of them occurred in the age group of 13-21 years. Based on study conducted by Wirawan et al, 2011 in (Tyas et al., 2018). Primary dysmenorrhea is experienced by 60-75% of young women. In 75% of them experience mild to moderate cramps, while in 25% experience severe pain and make the patient helpless. Then, based on Gumangsari's study, 2014 in (Fitria & Haqqattiba'ah, 2020) there are 90% of Indonesian women who have experienced menstrual pain or dysmenorrhea. The prevalence of the incidence of menstrual pain in Indonesia according to the 2010 Occupational Environmental Journal is quite high, namely 54.98% primary and 9.36% secondary.

Menstrual pain or dysmenorrhea is a problem that can interfere with the student's learning process so that it affects learning achievement, menstrual pain also interferes with daily activities which has an impact on a person's creativity decline, besides menstrual pain also makes a woman more sensitive due to the disturbing pain she feels. This is evidenced by the study of Widjanarko, 2006 in (Tyas et al., 2018) 71% of 100 women aged 15-30 years who experience menstrual pain, 5.6% of them cannot go to school or cannot work, and found 59, 2% experienced a decline in work productivity.

There are several efforts that are used as an alternative to overcome menstrual pain, namely by using pharmacological therapy or drugs and non-

pharmacological therapy other than drugs. However, prolonged pharmacological therapy will destabilize the body's immunity due to exposure to chemicals that enter the body, and can cause dependence (Tyas et al., 2018). Non-pharmacological therapies that can be used include exercise (gymnastics, yoga and physical activity), warm baths or saunas, using hot pots or warm compresses, meditation, horizon therapy, surgical therapy, acupuncture and acupressure (Risma A.P. et al., 2020).

According to Widyaningrum, 2013 in a study conducted by (Fitria & Haqqattiba'ah, 2020) Acupressure is a form of physiotherapy by providing massage and stimulation at certain points on the body (energy flow lines or meridians) to reduce pain. At the time of giving the massage should not be too hard and make the patient feel pain (Radyanto Iwan Widya Hartono, 2012).

Acupressure massage pressure can use fingers or other tools. If using fingers, negative pressure can be adjusted, massage pressure can be done using the tip of the thumb or index finger with a strength of 900 - 1200 gr/cm² or the nail color changes from reddish to pale (Hilda Sulistia Alam, 2020).

According to Hasanah 2014 in (Tyas et al., 2018) acupressure therapy can increase endorphins in the brain which naturally can help offer pain relief. Acupressure used to reduce menstrual pain has acupoints or the meeting point of the spleen, liver and kidney channels located in the spleen meridian, one of which is the sanyinjiao point which is located four fingers above the inner ankle.

In accordance with the explanation above, acupressure is classified as a non-pharmacological therapy without side effects, which can be used as an alternative to reduce menstrual pain or dysmenorrhea. The formulation of the problem in this study is "Is there any effect of acupressure on menstrual pain in adolescents?". Then the purpose of this study was to explain the effect of acupressure on menstrual pain in adolescents.

It is hoped that this study can contribute facts or empirical evidence regarding the effect of acupressure on menstrual pain in adolescents, so that it can add insight to readers, especially teenagers who often experience menstrual pain.

METHOD

This study was a literature study or literature review with a systematic mapping study design. This study used secondary data from previous official research articles and journals, obtained through protocols and filters

in the inclusion criteria, so that the journals used were high quality and in accordance with the research topic. The journals used were obtained from the Google Scholar, PubMed and Sciencedirect databases.

The population in this study were adolescents who experienced menstrual pain, the intervention given to overcome menstrual pain was acupressure, the results of the study were compared with adolescents who experienced menstrual pain without being given acupressure or other treatment, seen from the difference in the intensity of menstrual pain before and after being given acupressure. The study design was an experimental.

The journals used as literature sources were obtained in the database using keywords, namely acupressure and menstrual pain or acupressure and menstrual pain. In addition, in searching for sources, researchers also pay attention to inclusion and exclusion criteria. The inclusion criteria used are: a. middle-aged and elderly adolescents who experience menstrual pain, 2016-2020 issue, use one or more of the sanyinjiao, taichong, hegu, and guanyuan acupoints, use Indonesian or English, have DOI/ISSN/PMID, and are accessible in full text.

Table 1 Inclusion and Eksklusion Criteria

<i>Inclusion Criteria</i>	<i>Exclusion Criteria</i>
1) <i>The population is middle and late adolescents who experience dysmenorrhea.</i>	1) <i>The population is teenagers who have congenital diseases.</i>
2) <i>Issued for the 2016-2020 period.</i>	2) <i>Not using the pretest-posttest approach or the experimental-control group in the design.</i>
3) <i>Using one or more of the acupoit sanyinjiao, taichong, hegu and guanyuan.</i>	3) <i>Do not use pain intensity calculations other than 0-10 in the scale used.</i>
4) <i>Use Indonesian or English.</i>	4) <i>Given other interventions besides acupressure.</i>
5) <i>Accompanied by ISSN or PMID or DOI.</i>	
6) <i>Journals can be accessed in full text.</i>	
7) <i>Experimental study.</i>	

Then the review is carried out in several ways, including: looking for similarities (compare), looking for dissimilarities (contrast), providing views (criticizing), comparing (synthesize), and summarizing (Summarize). After that the results will be presented in the form of narratives and tables.

RESULT

The most widely used journals in this study were the 2019 editions, which were 40%, 40% of the journals studied used a quay experimental design. All journals examined the effect of acupressure on menstrual pain. The majority of the journals used used one group pre-test post-test in their design. The most widely used pain scale measurement instrument is the Numerical Rating Scale (NRS), which is 60%.

Table 2: Respondent Carasteristic

<i>Journal</i>	<i>Amount</i>	<i>Education</i>	<i>Age Group (Teenager)</i>	<i>Incidence of Menstrual Pain (Day)</i>
1	30	PT	Ends	1 and 2
2	221	24 years	Ends	1 - 3
3	31	SMA	middle	not mentioned
4	30	SMA	middle	1 - 3
5	100	SMA	middle	1 - 3
6	30	not mentioned	not mentionedd	not mentioned
7	35	SMA	middle	1
8	16	PT	Ends	1 and 2
9	30	PT	Ends	1 and 2
10	56	SMA	middle	not mentioned

The total of all respondents in the journals studied were 579 respondents. The age group of respondents in the journal 50% are late teens, 40% are middle to late teens who are in high school, and there is 1 journal that does not mention the age group of the respondents.

In giving acupressure, the majority of the points used are the sanyinjiao point (Sp 6) as much as 80% and the most widely used technique is pressing. The duration of acupressure is very diverse, ranging from 1 – 20 minutes.

Table 3: Menstrual Pain Intensity

<i>Pain before menstrual</i>		<i>Pain after menstrual</i>		<i>Difference</i>
<i>Intensity</i>	<i>Category (Pain)</i>	<i>Intensity</i>	<i>Category (Pain)</i>	
4,63	<i>Sedang</i>	3,23	<i>Ringan</i>	1,4
4,9	<i>Sedang</i>	3,5	<i>Sedang</i>	1,4
5,77	<i>Sedang</i>	2,06	<i>Ringan</i>	3,71
7,52	<i>Berat</i>	3,13	<i>Ringan</i>	4,39
8,1	<i>Berat</i>	1,4	<i>Ringan</i>	6,7
4,73	<i>Sedang</i>	2,61	<i>Ringan</i>	2,12
3,57	<i>Ringan</i>	2,71	<i>Ringan</i>	0,86
7,19	<i>Berat</i>	2,06	<i>Ringan</i>	5,13
4,40	<i>Sedang</i>	1,27	<i>Ringan</i>	3,13
6,50	<i>Sedang</i>	2,67	<i>Ringan</i>	3,83

From the results of the study, it was also stated that the average decrease in pain intensity was between before and after being given acupressure. The decrease that occurs starts from a scale of 0.86 to 6.7.

DISCUSSION

a. Giving acupressure to adolescents who experience

Of all the journals studied, 80% of them used or included the sanyinjiao point (Sp 6). Sanyinjiao point acupressure is very important for reducing menstrual cramps, regulating the menstrual cycle, treating pain, and increasing energy because the strong point moves qi (energy) and xue (blood) (Heni Setyowati, 2018).

Giving this acupressure can be done in various ways. According to (Heni Setyowati, 2018) giving acupressure can be done by pressing, turning, tapping, tapping and pulling on the meridians used. Pressing or massaging is the simplest and easiest way to apply. Almost anyone can apply pressure or give a massage. According to Ali, 2005 in (Renityas, 2017), applying pressure or massage to the meridians can stimulate certain points in the body. One of the effects of suppressing acupressure points can increase levels of endorphins which are useful as pain relievers (Widyaningrum, 2013).

According to researchers, the sanyinjiao point (Sp 6) is the most widely used because this point is easily accessible by people who want to do acupressure. People who are using acupressure for the first time can easily find this point to do acupressure when menstrual pain occurs. The majority of menstrual pain experienced at the beginning of menstruation occurs. According to researchers, massaging and pressing is the simplest method and is very commonly used, especially in

Indonesia. If given instructions to provide stimulation to acupressure points, lay people will have the assumption that stimulation related to pain is to provide massage or pressure.

b. The intensity of adolescent menstrual pain before and after being given acupressure

The decrease in the intensity of menstrual pain from each journal varies from a scale of 0.86 to a scale of 6.7. This decrease in menstrual pain also occurred in different pain categories according to the respondent's initial pain condition. As many as 50% of journals mentioned a decrease in pain intensity from the moderate category to the mild category and 30% said there was a decrease in the intensity of menstrual pain from the heavy category to the mild category.

The highest reduction in pain intensity occurred in research (Othman et al., 2019) which was a study that used the sanyinjiao meridian (SP 6). Giving acupressure is done 2 times a day at different times, namely at 8 am and 8 pm. The time used in giving acupressure is the majority of the time adolescents are in the study (Othman et al., 2019).

Then the lowest decrease in average pain intensity occurred in a study conducted by (Wijayanti & Selviana, 2019) which was 0.86. Giving acupressure in research (Wijayanti & Selviana, 2019), was carried out 6 times in 30 minutes with a duration of 30 seconds to 2 minutes. Research (Wijayanti & Selviana, 2019)

According to the researchers, the decrease in the intensity of menstrual pain did not occur based on the number of acupressure points used, but based on the duration and how often acupressure was given. The longer and more often the acupressure is given, the greater the effect on decreasing the intensity of pain. The decrease in the intensity of menstrual pain occurs at different levels, this is in accordance with the level of pain experienced by respondents before giving acupressure and the length of time giving acupressure itself.

c. The results of the analysis on the effect of acupressure on menstrual pain in adolescents.

According to (Wong, 2011) acupressure can open blockages or constrictions in the veins, stimulate nerve nodes and affect the glands. The workings of emphasis on acupressure points will instruct the endocrine system to release a number of endorphins according to the body's needs, which are useful as pain killers that the body produces itself. Endorphins can affect pain-sensing areas in the brain in a similar way as pain relievers (Ridwan & Herlina, 2015).

This is in line with the statement (Sumanto, 2013) that physiologically acupressure can normalize the hypothalamic pituitary ovary (HPO) axis, through the release of peptides (opioids) including beta endorphins in the central and peripheral nervous systems. Abnormalities of the pituitary system can inhibit the production of the hormone GnRH which regulates the menstrual cycle and fertility. Thus, acupressure can reduce the intensity of menstrual pain.

According to researchers, giving acupressure is effective for reducing menstrual pain. This is because giving massage or pressure or massage can increase a sense of comfort and calm. It is also scientifically explained that giving acupressure can stimulate the hypothalamus to secrete endorphins that are useful as natural pain relievers.

CONCLUSION

The most widely used acupressure point for sufferers of menstrual pain or dysmenorrhea is the sanyinjiao point (SP 6). Acupressure is generally given at the beginning of menstruation by pressing or massaging techniques. The intensity of menstrual pain decreased after being given acupressure, the decrease in the average pain intensity of all studied journals ranging from 0.86 to 6.7 scales. The longer and more often the acupressure is given, the greater

the effect on decreasing the intensity of menstrual pain. Giving acupressure can reduce the intensity of menstrual pain because acupressure can stimulate the hypothalamus to secrete endorphins that are useful as pain relievers which can naturally be released by the body itself. significant effect of giving acupressure on decreasing the intensity of menstrual pain in adolescents.

SUGGESTION

For Further Researchers: It is hoped that further researchers will use a more homogeneous literature so that the results of the literature review are more accurate and minimize bias. For Health Workers: It is hoped that acupressure can be an alternative solution for health workers as an intervention used to treat menstrual pain in adolescents. For the Community: It is hoped that the community, especially teenagers, can know and apply acupressure in overcoming menstrual pain, so that it can be a solution to the problem of menstrual pain that is often experienced.

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CONFLICTS OF INTEREST

This study was issued by the Midwifery Applied Study Program which is not a major expert in the skill of performing acupressure, therefore, the author admits that there are shortcomings in the article. The author also advises the readers to look for other relevant sources in order to better master the topics related to the article. Regarding financial support, this article is fully funded by the author, so the author is not associated with any sponsoring agency.

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