

The Effect of Jasmine Inhalation Aromatherapy on the Intensity of Haid Pain (Dismenorea) in Adolescents

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Abstract: *Background:* Dysmenorrhea is pain that is felt during menstruation which is described as cramping pain in the lower abdomen that occurs during menstruation and is not a disease or often also called primary dysmenorrhea. Primary dysmenorrhea is experienced by 60-75% of women. Although generally not dangerous, but often felt disturbing for women who experience it. Non-pharmacological management is safer to use besides being simple, easy to do, minimizing side effects. *Objective:* Knowing the effect of jasmine inhalation aromatherapy on the intensity of menstrual pain (dysmenorrhoea) in adolescents. *Methods:* Pre-experimental with a one-group pretest-posttest design approach. The number of samples was 55 respondents. Respondents were given 0.5 cc jasmine inhalation aromatherapy in tissue for 10 minutes. Statistical tests use the Wilcoxon Match Pair test. *Results:* There was an influence of Jasmine Inhalation Aromatherapy on the intensity of menstrual pain (dysmenorrhoea) with an average reduction in menstrual pain intensity of 1.87 with an Asymp.sig (2-tailed) value of 0.001 ($p < 0.05$). *Conclusion:* For women who have a history of menstrual pain to inhale jasmine aromatherapy during menstruation as a nonpharmacological therapy to reduce pain before or during menstruation.

Keywords: aromatherapy jasmine, inhaled aromatherapy jasmine, dysmenorrhea

1. Introduction

Dysmenorrhoea is menstrual pain which is a symptom and not a disease. Feelings of pain during menstruation can be in the form of mild cramps in the genitals. Currently, there are many methods used to help reduce pain. These methods can be either pharmacological or non-pharmacological methods. Aromatherapy is a method that uses essential oils to improve physical health and also affect one's emotional health. Jasmine essential oil in aromatherapy is to reduce muscle spasms, including menstrual spasms.

2. Literature Survey

Menstruation occurs naturally and physiologically in all normal women who are not pregnant and are not yet menopausal. Menstruation is periodic and cyclic bleeding from the uterus, accompanied by release (desquamation) of the endometrium. Although menstruation is a normal event, many women experience menstrual disorders in the form of menstrual pain. Menstrual pain is called dysmenorrhoea.[1] Dysmenorrhoea is menstrual pain which is a symptom and not a disease.[2] Pain during menstruation can be mild cramps in the genitals.[3] Clinically dysmenorrhea is divided into 2 namely primary dysmenorrhoea and secondary dysmenorrhoea.[2]

In Indonesia, the incidence of dysmenorrhea is 64.25% consisting of 54.89% of primary dysmenorrhea and 9.36% of secondary dysmenorrhea.[8] Primary dysmenorrhea is experienced by 60-75% of young women with $\frac{3}{4}$ of these women experiencing mild to moderate pain and $\frac{1}{4}$ again experience severe pain.[9] In middle school students, approximately 10% of teenagers cannot attend school because of menstrual pain.

Dysmenorrhea is pain that is felt during menstruation which

is described as cramping pain in the lower abdomen that occurs during menstruation and is not a disease or often also called primary dysmenorrhea.[11] The prevalence of dysmenorrhea occurs in almost all women in every country. With an average of more than 50% of women in every country experiencing dysmenorrhea.[12]

Currently, there are many methods used to help reduce pain. These methods can be either pharmacological or non-pharmacological methods. Non-pharmacological measures can be in the form of alternative therapies, namely acupuncture, aromatherapy, hypnosis, and music therapy. [14]

Aromatherapy is a method that uses essential oils to improve physical health and also affect one's emotional health. Aromatherapy can be done with various methods such as massage, inhalation, bathing, ingestion, spray (spray) and compresses. Various kinds of essential oils are used as aromatherapy, for example, clove oil, cinnamon, ginger, lavender, jasmine, kapulogo sabrang, black pepper, eucalyptus, peppermint, and valerian. The oils smell nice so they can calm and relieve stress.[15]

Inhalation through tissue is a good method of aromatherapy and is very effective when fast results are needed. Jasmine is one of the most expensive essential oils. This oil has a warm, floral, and exotic odor. One of the benefits of jasmine essential oil in aromatherapy is to reduce muscle spasms, including menstrual spasms. Compared to other essential oils, jasmine has a more fragrant odor.[15]

2. Methods/Approach

This type of research is quantitative research with pre-experimental methods using one-group pretest-posttest

design. The sample used in this study were all members of the population, namely 55 people. The instrument used in this study was a pain intensity scale according to Bourbonnais, 0.5 cc jasmine aroma essential oil, and 1 sheet of Tessa facial tissue measuring 180x190 mm. Data normality test using the Kolmogorov Smirnov test and abnormal data was obtained so that the statistical test was performed using the Wilcoxon Match Pairs test.

3. Results & Discussion

3.1 Frequency distribution of pain intensity dysmenorrhoea before jasmine inhalation aromatherapy is given

Pain Intensity	Total	Percentage (%)
No Pain	0	0
Mild Pain	12	21,8
Moderate Pain	30	54,5
Controlled severe pain	13	23,6
Uncontrolled severe pain	0	0
Total	55	100

The results showed that most of the respondents before being given aromatherapy felt pain with moderate intensity in the amount of 30 people (54.5%). While the highest level of pain intensity felt by respondents is controlled pain with the pain scale 9 and the lowest level of intensity experienced by respondents is mild pain with pain scale 1. There were no respondents who felt pain at the level of severe pain uncontrolled and not painful.

Data on the intensity of dysmenorrhoea pain vary in respondents before aromatherapy is given. This is due to the factors that play an important role in causing dysmenorrhoea, including psychiatric factors, the constitution, obstruction of the cervical canal, endocrine and allergic.

3.2 The intensity of menstrual pain (dysmenorrhoea) after being given aromatic inhalation of jasmine

Pain Intensity	Total	Percentage (%)
No Pain	2	3,6
Mild Pain	32	58,2
Moderate Pain	18	32,7
Controlled severe pain	3	5,5
Uncontrolled severe pain	0	0
Total	55	100

After being given aromatherapy, there was a decrease in pain intensity that was different for each respondent. The highest level of pain intensity that was felt by respondents was controlled pain with a pain scale of 9 and the lowest level of intensity felt by respondents was no pain with pain scale 0. This experienced an increase in frequency from before being given aromatherapy by 36.4%.

In this study, there may be a difference in the amount of attention and anxiety before and after the inhalation of jasmine aromatherapy. When aromatherapy is done the respondent will feel more relaxed and calm. This relaxed and

calming impression can distract the attention and anxiety of the respondent from the menstrual pain he is experiencing. Decreased attention and anxiety towards menstrual pain will cause a decrease in pain perception. Each respondent experiences a different level of pain perception reduction so that the magnitude of the decrease in menstrual pain intensity perceived by respondents also varies.

3.3 Effects of jasmine inhalation aromatherapy on the intensity of dysmenorrhoea pain

Pain Intensity	Mean	SD	pValue	N
Before aromatherapy	5,09	1,849	0,001	55
After aromatherapy	3,22	1,873		55

The test results show that the p-value is 0,000 ($p < 0.05$) which means that there is an influence of jasmine inhalation aromatherapy on the intensity of dysmenorrhoea pain. This is consistent with the theory that aromatic inhalation of jasmine can relieve the pain of dysmenorrhoea.

The mechanism of decreasing the intensity of pain in dysmenorrhoea with inhalation aromatherapy of jasmine is when jasmine essential oil is inhaled, volatile molecules from the oil are carried by air currents to the "roof" of the nose where soft cilia emerge from receptor cells. When the molecules attach to the hairs, an electrochemical message will be transmitted through the ball and olfactory channel into the limbic system. This will stimulate memory and emotional response. The hypothalamus acts as a relay and regulator, giving rise to messages that must be conveyed to other parts of the brain and other parts of the body. The message received is then converted into action in the form of the release of electrochemical compounds that cause euphoria, relaxes or sedatives such as endorphin and dynorphin. This limbic system is mainly used in emotional expression.

4. Conclusion

There is an influence of aromatic inhalation of jasmine on menstrual pain (dysmenorrhoea). This is indicated by the results of the analysis of the study which found an average decrease in menstrual pain intensity of 1.87 with an Asymp.sig (2-tailed) value of 0.001 ($p < 0.05$).

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Author Profile



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