**THE EFFECTIVENESS OF LAVENDER AROMATHERAPY TO DECREASE THE SCALE OF DYSMENORRHEA IN TEENAGERS (GIRLS)**

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**ABSTRACT**

Dysmenorrhoea is pain during menstruation accompanied by cramps in the lower abdomen that spreads to the back and thighs, pain usually occurs on the first or second day of menstruation and reaches its peak in the first 24 hours. Lavender Aromatherapy is used as one of the nonpharmacological therapies to decrease the intensity of dysmenrhoea. The purpose of this research is to determine the effectiveness of lavender aromatherapy in reducing the scale menstrual pain (dysmenorrhea) in teenagers(girls). This research is a quantitative study using pre-experimental method with One Group Pretest Posttest approach. The sampling technique used is purposive sampling with a sample of 34 respondents. Data collection is carried out with a pain measuring scale measurement tool 10 points later recorded in the observation sheet and analyzed using the Dependen Samples T Test with α = 0.05. The results of this research obtained the DYSMENORRHOEA scale before aromatherapy Lavender was almost entirely subjected to moderate pain scale (76.5%) Whereas after being given dysmenorrhea,the scale of aromatheraphy Lavender was mostly (55.9%) to mild pain scale. The test result Dependen Samples T Test showed p value 0.000 < α (0.05). Conclusion: There is the influence/difference in the giving of lavender aromatherapy against the reduce in the teenagers (girls) Conclusion: There is the influence/difference in the giving of lavender aromatherapy to reduce the pain scale in the teenagers (girls). Therefore, researchers suggested to the young women to use lavender aromatherapy as an alternative to nonpharmacological therapies in dysmenrhoea treatment, and advice for schools to apply this management independently in School.

Keywords : Effectiveness, Lavender Aromatherapy, Dysmenorrhea, Teenagers (girls)

**BACKGROUND**

Adolescence is a period of transition characterized by changes in physical, emotional and psychic developments. Adolescence, between the ages of 10-19 years is a period of maturation of human reproductive organs, and often called puberty (Rohan & Siyoto, 2013). Puberty is characterized by rapid body growth, changes in Genetalia function, and the presence of the menarche (first menstruation). Menstruation is a regular bleeding as a sign that the gynecologist has functioned (Kusmiran, 2014). The menstrual process takes place regularly every month on every normal woman starting about 14 days after ovulation (Sukarni & Rev, 2013).

Dysmenorrhoea is a pain during menstruation usually occurs on the first or second day and reaches its peak in the first 24 hours. Dysmenorea has an impact on school-age adolescents, as dysmentics can force the sufferer to rest and leave their routine for several hours or several days. The sense of insecurity experienced by a young woman if not resolved immediately will be the mental and physical function of the young woman so that it is very important to do actions or therapies that can reduce the pain when Menstrual (dysmenrhoea). There are two types of Dysmenorea, the primary dysmenrhoea and secondary dysmenrhoea. A primary dysmenorrhoea is a menstrual pain often encountered by teenagers (girls) without the underlying cause. Secondary dysmenorrhoea is a menstrual pain caused by gynecology disorders or other diseases (Sukarni and Revelation 2013).

The prevalence of dysmenrhoea incidence is still high, where the world's dysmenrhoea incidence rate reaches 90% (Holder, 2014). According to the World Health Organization (WHO) (2012) data, the incidence of 1,769,425 inhabitants (90%) Women who experience dysmenrhoea with 10-15% experiencing severe dysmenrhoea. An estimated 50% of all women in the world suffer from dysmenrhoea in a menstrual cycle (Calis, 2011). A dysmenrhoea incidence rate in Indonesia amounted to 107,673 people (64.25%), consisting of 59,671 people (54.89%) Primary Dysmenrhoea (Kallo, 2012). As the number of Dysmenrhoea events in West Java is still high, 54.9% of women suffer from dysmenrhoea, consisting of 24.5% mild dysmenrhoea, 21.28% experience moderate Dysmenrhoea and 9.36% severely dysmenrhoea (Arnis, 2012 in Aisyiyah Journal of Nursing, 2015).

Dysmenorea can be treated in two ways, namely with pharmacological and non-pharmacological therapy (Kumalasari & Andyantoro, 2012). One of these nonpharmacological therapies is by giving aromatherapy, which aims to reduce thelevel of pain. The Aromatherapy given in the form of lavender aromatherapy where the essential oil is inhalation, the penkiss receptor cells are stimulated and impulses are transmitted to the emotional center of the brain, or the limbic system (Marzouk et al, 2013).

Aromatherapy can reduce the level of pain in someone who dysmenorrhoea, this is because aromatherapy can provide a stimulating effect, giving a soothing sensation, a soothing sensation of the brain, a balance, a soothing sensation Stress, relaxation to the mind and physique of the body. So this effect can reduce the pain of dysmenorrhoea in someone and when the mind is calm and relaxed it will create a comfortable atmosphere, and decreased menstrual pain (NAJMI, 2011).

The Aromatherapy Levender (Lavandula angustifolia) gives the effect of reducing the intensity of painful menstruation (Yuliana, et al (2016) because the main ingredient in lavender (Lavandula angustifolia) is linalyl acetate and Linalool (C10H180). Linalool is the main active ingredient that contributes to the effect of relaxation on levender that has a soothing psychological efficacy. In addition, essential oils of lavender (Lavandula angustifolia) can reduce the level of anxiety, and are able to improve one's mood (goddess, 2013).

**METHODS**

The research was using a quantitative approach with research design using pre-experimentation method (Preexperimental designs) with one group Pretest Posttest (test unit) is subject to treatment with two times measurements, namely before the administration of lavender Aromatherapy and after administration of aromatherapy Lavender. Research is carried out by giving intervention to respondents which pre-test will take to measure the scale of dysmenorrhoea pain before being given treatment. Next will be given the treatment of lavender aromatherapy for 20 minutes, after the treatment of lavender aromatherapy will further post-test to measure back pain scale.

The population in this research was the all-class X and XI students of 369 students who had been menstruating. Researchers use non-probability sampling techniques, with the technique used is a sampling purposive, which is a specific consideration made by researchers (Notoadmodjo, 2012). The samples used were teenagers (girls) as many as 34 students (respondents) with the provisions of inclusion and exclusion that had been established by the researcher.

Data collection technology is by obtaining primary data and secondary data with data collection process consisting of preparation stage and implementation of data collection tools i.e. interviews, observations using the scale checklist sheet 10-point pain with Word description (Kozier, 2010), Standard operational procedure (SOP) Aromatherapy Lavender, lavender aromatherapy essential oil, as well as the form to be provided with the recording of respondent data. The observation sheet uses an intensity scale of 10-point pain and performs inhaler aromatherapy lavender using lavender aromatherapy essencial as much as 3 drops by mixing 20 ml of water into the next oil burner furnace Burned so that the steam is given for 20 minute

**RESULT**

The results of research conducted by researchers are as follows:

**Table 1.** The scale of menstrual pain (dysmenorrhoea) before the given of lavender aromatherapy.

|  |  |
| --- | --- |
| **Pain Scale** | **Result** |
| **Frequency** | **Presentage** |
| **Moderate Pain** | 26 | 76,5 % |
| **Severe Pain**  | 8 | 23,5 % |
| **Total** | 34 | 100,0 % |

Based on table 1, there are results that before aromatherapy has been given to respondents almost all of them, as many as 26 people (76.5%) had dysmenorrhoea with moderate pain scales, and a small portion of as many as 8 people (23.5%) had dysmenorrhoea in the severe pain.

Dysmenorrhoea is a pain that is felt during menstruation accompanied by cramps in the lower abdomen that can spread to the back and thighs, usually occurs on the first and second days of menstruation. This pain complaint can vary from mild to severe. Pain is a subjective and personal thing. Stimulus to pain is a naturally occurring physical or mental nature (Perry & Potter, 2010).

Pain that a person feels during menstruation, caused by the occurrence of changes in the hormone levels that are excessive in the body that will result in contraction in the muscles of the uterus so that the uterine muscles to strain this because the occurrence of increased Prostaglandin levels in the body thereby causing dysmenrhoea.

**Table 2.** The scale of menstrual pain (dysmenorrhea) after the given of lavender aromatherapy

|  |  |
| --- | --- |
| **Pain Scale** | **Result** |
| **Frequency** | **Precentage** |
| No Pain | 15 | 44,1% |
| Mild Pain | 19 | 55,9% |
| Total | 34 | 100,0 % |

Based on table 2, the result is that after aromatherapy has been given to the respondents in half as much as 15 people (44.1%) The dysmenorrhoea are on a painless scale, and most of the 19 people (55.9%) The dysmenorrhoea are at the scale of mild pain.

The Given of lavender aromatherapy affects the reduce in the scale of menstrual pain (dysmenorrhoea), because in lavender aromatherapy there are linalool and linalyl acetate content that plays a role in relaxation, and has a psychological efficacy Soothing. It is in line with the concept of theory according to Najmi (2011), said that aromatherapy can reduce the pain level in a person who has undergone dysmenorrhoea because aromatherapy can provide a stimulating effect, giving a soothing sensation of self, The sensation of soothing the brain, the balance, the soothing sensations of stress, relaxation to the mind and physique of the body. So this effect can reduce the pain in a person. If the mind feels calm and relaxed it will create a comfortable atmosphere so that the painful menstruation is reduced. In addition, this supported results from several research journals came the conclusion that the essential oil of lavender (Lavandula angustifolia) can provide relaxation benefits (carminative), sedative, reduced levels of anxiety, and being able to Improve the mood of a person (goddess, 2013).

**Table 3.** Test results of normality variable level of menstrual pain (dysmenorrhoea) in teenagers(girls) classes X and XI before and after the given of lavender aromatherapy

|  |  |
| --- | --- |
| **Pain Scale** | **Result** |
| **Variabel Value** |
| ***Skweness*** | **Standar *Error*** | **Distribusi Data** |
| Pain ScaleBefore | -0,417 | 0,403 | -1,03 ( Normal) |
| Pain ScaleAfter | 0,218 | 0,403 | 0,54 (Normal) |

Based on the analysis of the results of the study in table 3 test the normality above obtained data that the pain scale variables prior to the Aromatherapy Lavender obtained a value of 1.03 and a variable pain scale after administered lavender aromatherapy Obtained a value of 0.54, then all data is declared as a normal distribution because the value of skewness/SE is between values-2 to 2. Therefore, the test used is using parametric statistical test (for Sample T Test).

**Table 4.** Test result dependent parametric statistical Sample T Test on the scale of menstrual pain (dysmenorrhoea) before and after the given of lavender in the teenagers (girls) class X and XI

|  |  |
| --- | --- |
| **Pain Scale** | **Result** |
| **Variabel Value** | **Composite Value** |
| **N** | **Std. D** | **Std. Error** | **Mean** | **t** | **P Value** |
| BeforeAfter | 3434 | 0,9041,043 | 0,1550,179 | 5,821,06 | 39,754 | 0,000 |

Based on the results of the analysis of parametric statistical trials of the Sample T Test in table 4 above, the data obtained that the average period of menstrual pain (dysmenorrhoea) before given the value of aromatherapy lavender mean (5.82) with standard deviation (0.904) and standard Error (0.155). Meanwhile, average menstrual pain scale (dysmenorrhoea) after aromatherapy lavender mean value (1.06) with standard deviation (1.043) and standard error (0.179). From the results of parametric statistical test, Sample T Test obtained p value 0.000. Because P value of < α (0.05) then Ha is accepted and H0 is rejected. It is thus concluded that "there is a significant effect between the scale of menstrual pain (dysmenorrhoea) before and after the given of lavender in teenagers (girls) of class X and XI".

Based on the explanation above, it is proven that all respondents experienced a significant pain change after the given of lavender aromatherapy. This research is in accordance with the theory of Marzouk et al, (2013) says that some of the alternative therapies that can be done by nurses for the treatment of Dysmenrhoea are by using aromatherapy. Aromatherapy is used as a complementary therapy in nursing practice by using essential oils from fragrances plants to alleviate health problems and to improve one's life in general. Aromatherapy can be used as an alternative to reduce levels of dysmenorrhoea pain. When the essential oil is inhalation, the penkiss receptor cells are stimulated and impulses are transmitted to the emotional center of the brain, or the limbic system. Aromatherapy can provide relaxing, and calming effects, in addition to improving blood circulation. Aromatherapy is a cheap and safe therapy for DYSMENRHOEA.

**CONCLUSION**

The menstrual Pain Scale (DYSMENORRHOEA) experienced by the teenagers(girls) of class X and XI before being given lavender aromatherapy, is almost entirely within a moderate pain range. This is evident from the magnitude of the percentage of the moderate pain scale as many as 26 young women (76.5%). While the scale of menstrual pain (dysmenorrhoea) after being given lavender aromatherapy suffered a decrease in pain levels, in which the percentage of the majority is in the range of mild pain as many as 19 young women (55.9%). So it can be said that in this research there is a significant difference between the painful scale of menstruation (DYSMENORRHOEA) before and after the given of lavender in the teenagers (girls) class X and XI and in this study there are differences Significant between the menstrual pain Scale (dysmenorrhoea) before and after the given of lavender aromatherapy in the teenagers (girls) X grade and XI. It is evidenced by the value P = 0.000 < α value = 0.05.

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