

INFORMASI ARTIKEL

Received: September, 24, 2025

Revised: November, 25, 2025

Available online: November, 30, 2025

at : <https://e-jurnal.iphorr.com/index.php/mchc>

The effect of lavender aromatherapy on primary dysmenorrhea in female students

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University

Corresponding author: *E-mail: anamariza@malahayati.ac.id

Abstract

Background: Adolescence is marked by the maturation of reproductive organs, including menstruation, which is often accompanied by dysmenorrhea. In Indonesia, the prevalence of dysmenorrhea reaches 55%, and in Lampung it is recorded at 54.9%. Dysmenorrhea impacts activities, learning concentration, and even school attendance. At SMPN 1 Batu Ketulis, 81.2% of female students who visited the health center complained of menstrual pain. Pharmacological interventions such as analgesics have side effects. Non-pharmacological efforts such as lavender aromatherapy are considered effective, safe, and easy. Lavender contains linalool and linalyl acetate, which have relaxant properties.

Purpose: to determine the effect of lavender aromatherapy on primary dysmenorrhea in female students.

Method: This type of quantitative research uses a pre-experimental research design with a one-group pretest-posttest design. The population of this research is all female students at SMPN 1 Batu Ketulis, West Lampung Regency who experience menstrual pain a total of 86 female students were sampled with 30 respondents using purposive sampling techniques. Data collection used observation sheets, and data analysis was performed using univariate and bivariate methods (Wilcoxon test).

Results: The results of this study showed that the average dysmenorrhea in female students before being given lavender aromatherapy was 4.43 and after being given lavender aromatherapy was 1.13.

Conclusion: From the results obtained, there was a decrease of around 3.33 so that it can be interpreted that there was a significant effect of giving lavender aromatherapy on primary dysmenorrhea in female students.

Suggestion: Suggestions are expected for adolescents to use lavender aromatherapy in reducing menstrual pain.

Keywords: Dysmenorrhea; Female Students; Lavender Aromatherapy.

INTRODUCTION

Adolescence is a dynamic developmental phase and a transitional period from childhood to adulthood. During this time, numerous physical, psychological, and biological changes occur. This is the period during which reproductive organs mature, one of the signs of which in adolescent girls is menstruation. Menstruation is periodic vaginal bleeding caused by the shedding of the endometrial lining of the uterus (Djama, Lante, & Bansu, 2022).

Many changes occur during adolescence, as it is a

significant transition from childhood to adulthood. These changes can impact adolescent development, both physically and psychologically. These changes include hormonal, physiological, psychological, and social changes. This is the process of the adolescent's body moving toward maturity (Alatas & Larasati, 2016).

Menstruation, or menstruation, refers to the periodic discharge of blood and body cells from the vagina, which originates from the lining of a woman's

uterus. Menstruation typically begins between the ages of 10 and 13, depending on various factors including a woman's health, nutritional status, and body weight relative to height. Menstruation occurs once a month until a woman reaches the age of 45-50 (Rahma & Fransiska, 2016).

Generally, during menstruation, many women experience pain that lasts 2-3 days, starting the day before their period. The pain experienced during menstruation (dysmenorrhea) varies from woman to woman; some experience it only slightly, while others experience it so severely that they are unable to carry out daily activities, requiring rest or even being absent from school (Anurogo & Wulandari, 2011).

Dysmenorrhea has various causes, including disease (pelvic inflammatory disease), endometriosis, uterine tumors or abnormalities, excessive stress or anxiety, hormonal imbalance, age, a family history of dysmenorrhea, early menarche, and body mass index. The prevalence of dysmenorrhea in Indonesia is estimated at 55% of women of reproductive age who experience pain during menstruation. Of those who complain of pain, 12% experience severe pain, 37% moderate pain, and 49% mild pain (Wati, Ningrum, Sutini, Dari, Febriyanti, & Putri, 2024).

Primary dysmenorrhea often occurs in young people/adolescents with complaints of pain like cramps and its location in the lower middle of the uterus (Mariza & Sunarsih, 2019). The effects of dysmenorrhea on women include physical weakness, lack of movement, and stress. This menstrual pain prompts many young women to seek medical advice and treatment. The pain experienced before and during menstruation is often accompanied by nausea, dizziness, and weakness. Severe pain can require rest and leave work, and for young girls, it often leads to school absences and decreased concentration (Sabaruddin & Arifah, 2017).

There are several ways to relieve menstrual pain symptoms, including pharmacological and non-pharmacological methods. Pharmacological methods involve the use of analgesics, while non-pharmacological methods include lavender aromatherapy. Lavender is a bluish-purple flower with a distinctive, gentle aroma that is relaxing to inhale.

Lavender is a favorite aromatherapy scent, not only for its popularity but also for its numerous benefits. Lavender aromatherapy offers the advantages of simplicity, ease of use, storage, and reusability for dysmenorrhea. Lavender aromatherapy contains linalyl acetate and linalool, the main ingredients of which are linalyl acetate, which relaxes and relaxes tense nerves and muscles, while linalool acts as a relaxant and sedative, thus alleviating dysmenorrhea (Nuraeni, Solihatin, & Zakiyyah, 2021).

Lavender aromatherapy can be used by inhaling it directly, applying it to the lower abdomen, or using it in a massage to increase its effectiveness in relieving menstrual pain. Several studies are related to the benefits of Lavender in reducing dysmenorrhea pain (Sriwinih, 2018). There's also a non-pharmacological therapy to consider, namely warm compresses. During menstruation, uterine muscle contractions occur, causing spasms or cramps in the uterine muscles. Applying a warm compress to the lower abdomen during menstruation provides a warming effect and can increase blood circulation and capillary pressure. This can also relax the uterine muscles and reduce spasms. However, warm compresses should not be applied for too long, for example, more than an hour, as they can irritate the skin and cause pain in the abdominal skin (Khotimah & Lintang, 2022).

Lavender aromatherapy is widely used in the clinical field of obstetrics and gynecology. Lavender aromatherapy is used as a treatment to relieve pain, reduce post-cesarean pain, reduce depression and anxiety in postpartum mothers, and reduce dysmenorrhea (Maharani, Fatmawati, & Widyaningrum, 2016).

RESEARCH METHOD

The research design used is a pre-experimental research design with one group pretest-posttest where the researcher conducts the first observation (pretest) then the researcher tests the changes that occur after the treatment, in this design there is no control (comparison) group.

The population in this study was all female students at SMPN 1 Batu Ketulis, West Lampung Regency who experienced menstrual pain based on

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

The effect of lavender aromatherapy on primary dysmenorrhea in female students

screening of 86 female adolescents and the sample used was 30 people. The sampling technique in this study was purposive sampling. Data collection in this study used test instruments (dysmenorrhea pain observation sheet) and SOP for administering lavender aromatherapy.

Pre-Interaction (Preparation), population and Sample Identification Female students of SMPN 1 Batu Ketulis who are menstruating. Screening to Find 30 Respondents, using a screening questionnaire (about menstrual cycles, and history of dysmenorrhea). Conduct interviews or surveys several weeks before the first day of the intervention to identify students who consistently experience menstrual pain every month. Obtain approval from the school, ethics committee, and parents of students. Prepare an informed consent form and explanation of the research procedures.

Train students how to use aromatherapy (drop 3 drops onto cotton, inhale from a distance of 7 cm for 5 minutes). Train enumerators (research assistants) to assist with monitoring and documentation. Provide simple written guides and video tutorials for respondents. Intervention (day 1 to 3 of menstruation). Time and frequency aromatherapy is done every 6 hours (4 times a day) for the first 3 days of menstruation. Each session lasts 5 minutes, respondents dripped 3 drops of lavender oil onto cotton, inhale from a distance of 7–10 cm for 5 minutes, do it while sitting relaxed and not while doing heavy activities.

Post Intervention (evaluation) effectiveness measurement: use the Numerical Pain Scale (NRS) to record pain levels before and after the intervention. Data analysis: Compare the mean pain scores before and after the intervention and use the appropriate statistical test monitoring and logistics.

RESEARCH RESULTS

Table Characteristics Respondent (N=30)

Variable	Results
Age (Mean±SD) (Range) (Year)	(14.53±.507) (14 -15)
14	14/46.7
15	16/53.3
Age Menarche (n/%)	
10 Year	3/10.0
11 Year	11/36.7
12 Year	7/23.3
13 Year	9/30.0
Status Nutrition (n/%)	
Normal (BMI 18-24.9)	24/80.0
Abnormal (BMI < 18 and ≥25)	6/20.0

Table 1. Shows that the average age of respondents and standard deviation is (14.53±.507) with an age range of 14-15 years, the majority of respondents had a menarche age of 11 years, namely 11 (36.7%) and the majority had normal nutritional status, namely 24 respondents (80.0%).

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

Table 2 The Effect of Lavender Aromatherapy on Primary Dysmenorrhea

Dysmenorrhea	Median	Min - Max	Negative ranks	Sitive ranks	Ties	Value
Before Intervention	4.00	4-5	30	0	0	0.000
After intervention	1.00	0-2				

Table 2. Show the results of the Wilcoxon Signed Ranks Test were used to determine the difference in pain levels before and after the lavender aromatherapy intervention in respondents. Based on the analysis results, it was found that all respondents ($n = 30$) experienced a decrease in pain levels after the intervention. This is indicated by the number of negative ranks of 30, which means the post-test score < pre-test, with a mean rank of 15.50 and a sum of ranks of 465.00. There were no positive ranks or ties, which means that no respondents' pain remained the same or increased after the intervention. The statistical test results showed a Z value of - 4.853 with a significance value (Asymp. Sig. 2- tailed) of 0.000 ($p < 0.05$). This indicates a statistically significant difference between pain levels before and after lavender aromatherapy. Lavender aromatherapy significantly reduced primary dysmenorrhea pain levels in female students.

Table 3 Average Dysmenorrhea in Female Students Before and After Being Given Lavender Aromatherapy

Dysmenorrhea	Mean	Elementary School	Min- Max
Before	4.43	0.50	4-5
After	1.13	0.6	0-2

Based on table 3. above, it is known that the averagedysmenorrheaThe average pain score before the lavender aromatherapy intervention was given to female students 4.43 with a 95% confidence interval indicating that theaverage pain score before the intervention was in the range of 4.25 to 4.62. The median pain score was 4.00, with a standard deviation of 0.504, indicating that the distribution of pain data was relatively narrow. while the maximum score was 5, so the range was Average dysmenorrhea on female students after being given lavender aromatherapy Based on table 4 above, the average is known dysmenorrhea After the intervention of lavender aromatherapy, the level of pain in the respondents decreased significantly. The mean pain after the intervention was 1.13, with a standard error of 0.124. The 95% confidence interval for the mean was between 0.88 and 1.39. The median pain score decreased to 1.00, with a standard deviation of 0.681, which still showed variation but tended to be low. The

minimum pain score after the intervention was 0, while the maximum score was 2, so the range was 2.

DISCUSSION

According to the researchers, the results indicate that on the first day of menstruation, most female students experienced severe menstrual pain, characterized by a pain scale score between 4 and 5. This is consistent with the characteristics of primary menstrual pain, where pain intensity typically peaks on the first or second day of menstruation due to increased prostaglandin production by the endometrium. These prostaglandins trigger strong uterine muscle contractions, causing significant pain. Researchers also assessed that the differences in pain levels between respondents, although small (range 1), reflect the influence of individual factors, such as age, age at menarche, and nutritional status, on the body's perception and response to pain. For example, in adolescents with early menarche, body has

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

The effect of lavender aromatherapy on primary dysmenorrhea in female students

experienced hormonal fluctuations for longer, thus increasing the likelihood of more severe dysmenorrhea. Similarly, good nutritional status does not necessarily guarantee lower pain, as individuals with optimal hormonal metabolism may actually be more sensitive to pain. Researchers also believe that psychological factors and stress, not measured in this study, may contribute to variations in pain perception.

Students who experience anxiety or stress about menstruation tend to have a lower pain threshold. After being given aromatherapy Lavender had a significant effect in helping reduce primary menstrual pain (dysmenorrhea) in adolescents. Some female students experienced a very significant reduction in pain to a score of 0, meaning they felt no pain at all. On the other hand, there were also female students who still reported pain with a score of 1 or 2, although not as high as before the intervention. Overall, according to the researchers, this data strengthens the importance of non-pharmacological interventions such as aromatherapy in helping reduce menstrual pain, considering that most female students experience severe pain and this condition can interfere with learning activities and the quality of life of adolescent girls.

Based on the results of the Wilcoxon Signed Ranks test, all respondents ($n = 30$) experienced a decrease in pain levels after being given lavender aromatherapy intervention. The analysis results showed that all respondents had negative ranks, meaning that the pain score after the intervention was lower than before the intervention. No positive ranks or ties were found, indicating that no respondents experienced an increase or no change in pain after the intervention. The Z value of -4.853 and p-value of 0.000 ($p < 0.05$) indicate that this difference is statistically significant, so it can be concluded that the administration of lavender aromatherapy is effective in reducing menstrual pain (primary dysmenorrhea).

In line with previous research which revealed that there was an effect of lavender aromatherapy on reducing the intensity of primary dysmenorrhea pain in midwifery students at Aisyiyah University Yogyakarta, with a p value of 0.000 (<0.05) (Kamidah & Ismarwati,

2024). Other research obtained statistical test results with a p value = 0.000 which means there was a significant difference between before and after administration of lavender aromatherapy on the level of dysmenorrhea (Riana, 2024). Previous research also showed that there was an effect of lavender aromatherapy on dysmenorrhea in adolescents in Grobogan District, Grobogan Regency, with a p value of 0.007. However, it is important to note that the level of pain experienced by respondents varied. Some respondents did not experience pain at all after the intervention (score 0), while others still experienced mild to moderate pain (score 1 or 2). This variation indicates that individual responses to lavender aromatherapy are not uniform and may be influenced by several factors (Natassia, 2021)

Aromatherapy has a positive effect because it is known that fresh and fragrant aromas stimulate sensory receptors and ultimately affect other organs so that it can have a strong effect on emotions. The aroma is captured by receptors in the nose which then provide further information to the brain area that controls emotions and memory and provides information to the hypothalamus, which is the regulator of the body's internal systems, including the sexual system, body temperature, and reactions to stress. (international journal) From this analysis, the researchers concluded that lavender aromatherapy is generally very effective in reducing primary dysmenorrhea pain, but the optimal response is greatly influenced by the biological, psychological, and individual characteristics of each respondent. Nevertheless, because all respondents experienced a decrease in pain levels, lavender aromatherapy can be considered a feasible and safe non-pharmacological intervention to reduce menstrual pain in adolescent girls. This is in line with previous research that used aromatherapy as an alternative to reduce pain in mothers after cesarean section at Pringsewu Regional Hospital. A decrease in pain intensity was found after the aromatherapy intervention (Mariza & Haryati, 2019).

Previous research revealed that from the results of the literature review, it can be concluded that the role of lemon aromatherapy and lavender aromatherapy

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

The effect of lavender aromatherapy on primary dysmenorrhea in female students

can have an effect on reducing dysmenorrhea pain in adolescents. The majority of adolescents who experience dysmenorrhea feel a reduction in pain after being given lemon aromatherapy or lavender aromatherapy (Kusumaningsih, Sakinah, & Rahmawati, 2024). This is in line with other studies showing a 100% reduction in pain scale (13 journals) after administering lavender aromatherapy. The causes of dysmenorrhea, according to the journals, were age (61.5%), menarche age <13 years (46.1%), regular cycles (76.9%), and menstrual duration of 2-6 days (69.2%). The pain scale based on the journals was moderate pain (77%), and the intervention given according to the journals was inhalation (53.8%). This indicates that lavender aromatherapy has an effect on reducing dysmenorrhea in young women (Barreto, Ernawati, & Prabandari, 2023).

Pharmacological pain relief treatments often cause side effects. Therefore, non-pharmacological treatments such as aromatherapy are an alternative. Various aromatherapy options include rose, jasmine, ylang-ylang, cinnamon, sandalwood, basil, lavender, and citrus. Currently, complementary therapy for pain relief uses lavender essential oil. This is because lavender is calming and has anxiolytic, antidepressant, and anticonvulsant properties. Psychologically, lavender aromatherapy can reduce tension and anxiety and relax the mind, while physically, lavender aromatherapy can reduce pain (Rambe, 2022). Lavender oil aromatherapy is obtained by distilling the flowers. Lavender oil is versatile, particularly suitable for treating sunburn, peeling skin, psoriasis, and insomnia. Lavender has a light, floral aroma and is an essential aromatherapy essential oil known for its sedative and anti-neurodepressant effects. Lavender aromatherapy also contains the key ingredient linalool acetate, which can relax and soothe tense nervous systems and muscles. Inhaling lavender increases the frequency of alpha waves in a state associated with relaxation (Sari, 2018).

CONCLUSION

Based on the results of data processing on the effect of lavender aromatherapy on reducing primary dysmenorrhea, the following conclusions can be

drawn: Based on the characteristics of the respondents, the majority were 15 years old (53.3%), the most common age of menarche was 11 years old (36.7%), and the nutritional status of the majority was in the normal category (80.0%). It is known that the averagedysmenorrheain female students before being given lavender aromatherapy was 4.43 with a standard deviation value of 0.50, a minimum value of 4 and a maximum value of 5. It is known that the averagedysmenorrheain female students after being given lavender aromatherapy was 1.13 with a standard deviation value of 0.6, a minimum value of 0 and a maximum value of 2. There is an effect of giving lavender aromatherapy on primary dysmenorrhea in female students at SMPN 1 Batu Ketulis, West Lampung Regency in 2025 (p-value = 0.000).

SUGGESTION

For Teenagers It is recommended to use lavender aromatherapy independently when experiencing menstrual pain, especially on the first to third day of menstruation, with a simple method: Drop 3 drops of lavender oil onto a cotton ball, then inhale from a distance of about 7 cm for 5 minutes and repeat every 6 hours. Teenagers need to maintain a healthy and balanced diet, as good nutritional status helps the body respond optimally to therapy and reduces the risk of severe menstrual pain. Increase consumption of vegetables, fruit, water, and foods rich in iron and magnesium, which can help reduce uterine muscle contractions. Adequate and regular sleep helps maintain body hormones in balance and can reduce the severity of dysmenorrhea.

For School Institution can consider providing lavender aromatherapy as an alternative treatment for menstrual pain in the health center (UKS), especially during the early days of menstruation. Guidance and counseling teachers and homeroom teachers are advised to develop educational programs on non-drug menstrual pain management, including simple and safe methods for using aromatherapy at home and at school. Schools can collaborate with community health centers or school midwives to provide adolescent reproductive health training and integrate non- pharmacological therapies such as aromatherapy into UKS activities or health extracurricular activities.

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

REFERENCES

- Alatas, F., & Larasati, T. A. (2016). Dismenore primer dan faktor risiko Dismenore primer pada Remaja. *Medical Journal of Lampung University [MAJORITY]*, 5(3), 79-84.
- Anurogo, D., & Wulandari, A. (2011). Cara jitu mengatasi nyeri haid. *Yogyakarta: Andi*, 194.
- Barreto, Z., Ernawati, E., & Prabandari, F. H. (2023). Pengaruh Aromaterapi Lavender Untuk Mengurangi Dismenore Pada Remaja Putri: Systematic Literatur Review. *Jurnal Indonesia Sehat*, 2(2), 82-92.
- Djama, N. T., Lante, N., & Bansu, I. A. (2022). Buku Ajar Kesehatan Reproduksi Remaja. *JEUREKA MEDIA AKSARA. Jawa Tengah*.
- Kamidah, S., & Ismarwati, I. (2024). Pengaruh Pemberian Aromaterapi Lavender Terhadap Penurunan Intensitas Nyeri Dismenorea Primer Pada Mahasiswa Kebidanan. *Indonesian Journal of Professional Nursing*, 5(1), 70-77.
- Khotimah, H., & Lintang, S. S. (2022). Terapi non-farmakologi untuk mengatasi nyeri dismenore pada remaja. *Faletehan Health Journal*, 9(03), 343-352.
- Kusumaningsih, M. R., Sakinah, H., & Rahmawati, A. (2024). Pemberian Aromaterapi Lemon dan Lavender terhadap Nyeri Dismenore pada Remaja: Literature Review. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*, 7(3), 540-549.
- Maharani, Y. V., Fatmawati, E., & Widyaningrum, R. (2016). Pengaruh aromaterapi bunga lavender (*lavandula angustifolia*) terhadap intensitas nyeri haid (dismenore) pada mahasiswi STIKES Madani yogyakarta. *Jurnal kesehatan madani medika*, 7(1), 43-49.
- Mariza, A., & Haryati, D. H. S. (2019). Pengaruh aroma terapi blend essential minyak lavender terhadap nyeri pada pasien pasca operasi sectio caesarea di RSUD Pringsewu 2016. *Jkm (Jurnal Kebidanan Malahayati)*, 4(3).
- Mariza, A., & Sunarsih, S. (2019). Manfaat Minuman Jahe Merah Dalam Mengurangi Dismenorea Primer. *JKM (Jurnal Kebidanan Malahayati)*, 5(1).
- Natassia, K. (2021). *Monograf Larutan Aromaterapi Lavender Untuk Insomnia*. Media Sains Indonesia.
- Nuraeni, N., Solihatin, Y., & Zakiyyah, Z. (2021). Management of Dismenore Pain with Exercise Stretch Paint. *Journal of Nursing Care*, 4(1).
- Rahma, M., & Fransiska, W. P. (2016). Hubungan Antara Lama Menstruasi dan Usia Menarche Terhadap Kejadian Dismenore Pada Mahasiswi Tingkat I Di Akbid Abdurahman Palembang Tahun 2015. *Jurnal Kesehatan Abdurahman*, 5(2), 1-10.
- Rambe, N. L. (2022). Pengaruh Aromaterapi Lavender Untuk Mengurangi Nyeri Persalinan: a Systematic Review. *Jurnal Ilmiah Kebidanan Imelda*, 8(1), 25-34.
- Riana, I. (2024). Pengaruh Pemberian Aromaterapi Lavender Terhadap Tingkat Dismenore Primer Pada Remaja Putri di SMP Negeri Satu Atap 1 Banama Tingang (Doctoral Dissertation, POLTEKKES KEMENKES PALANGKARAYA).
- Sabaruddin, H. F., & Arifah, S. (2017). *Hubungan Pengetahuan Tentang Dysmenorhea Dengan Perilaku Penanganan Dysmenorhea Di Pesantren As-Syalaiah Mlangi Yogyakarta* (Doctoral dissertation, Universitas Aisyiyah Yogyakarta).

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806

Sari, D. A. (2018). Pengaruh Aroma Terapi Lavender terhadap kualitas tidur lansia di wisma cinta kasih. *Jurnal Endurance*.

Sriwinih, D. (2018). Pengaruh Pijat Minyak Lavender Terhadap Nyeri Menstruasi Pada Mahasiswi Kebidanan Di Asrama Green Dormitory Universitas Malahayati Tahun 2017. *Jurnal Analis Farmasi*, 3(2), 132-140.

Wati, M., Ningrum, S., Sutini, S., Dari, W., Febriyanti, H., & Putri, N. A. (2024). Pengaruh Kompres Hangat Terhadap Penurunan Nyeri Dismenore Pada Remaja Putri Di SMP N Satap 1 Pagar Dewa Lampung Barat. *Innovative: Journal Of Social Science Research*, 4(6), 5730-5745.

Livia Nizaranuki*, Ana Mariza, Sunarsih

Bachelor of Midwifery Program, Malahayati University
Corresponding author: *E-mail: anamariza@malahayati.ac.id

DOI: 10.56922/mchc.v4i8.1806