



THE EFFECTIVENESS OF LAVENDER AROMATHERAPY TECHNIQUE ON PAIN REDUCTION OF POST CAESAREAN SECTION PATIENTS IN AJIBARANG HOSPITAL

Siti Haniyah¹, Martyarini Budi Setyawati²

1. Harapan Bangsa Institute of Health Sciences Purwokerto
2. Harapan Bangsa Institute of Health Sciences Purwokerto

ABSTRACT

The number of caesarean section birth in Indonesia were 22.8% or 921,000 out of 4,039,000 childbirth. The patients become conscious when the anesthetic effect disappears and they will feel pain in the incision area that makes them uncomfortable. One of the methods to reduce pain of Caesarean Section is lavender aromatherapy technique. The purpose of this study was to determine the effectiveness of lavender aromatherapy technique on pain reduction of caesarean section post-operative patients in Ajibarang hospital. This study was conducted by using a quasi-experimental design with pretest-posttest design. The samples were 22 respondents divided into two groups; 11 respondents received lavender aromatherapy treatment and 11 respondents were in the control group. Paired t test was used to describe pain scale differences in the control group and intervention. The results showed that there was a difference in the pain scale between lavender aromatherapy technique group and the control group with p value of 0.000. It can be concluded that lavender aromatherapy technique reduces pain in post-operative caesarian section patients.

Keywords : lavender aromatherapy, caesarean section post-operative care, pain

ABSTRAK

Angka kejadian Caesarean section di Indonesia 921.000 dari 4.039.000 persalinan (22,8%) dari seluruh persalinan. Pasien akan mulai bergerak saat efek anastesi telah habis dan setelah itu mereka akan merasakan nyeri pada area pembedahan sehingga menimbulkan ketidaknyamanan. Salah satu metode untuk menangani Nyeri post Sectio C aesarea adalah dengan teknik aroma terapi lavender. Tujuan dari penelitian ini adalah untuk mengetahui efektifitas teknik aroma terapi lavender terhadap nyeri pada pasien post operasi Caesarean section di RSUD Ajibarang Desain penelitian ini adalah quasi eksperiment with pretest-posttest design dengan sampel 22 responden terbagi menjadi 2 kelompok, 11 responden mendapatkan aroma terapi lavender, dan 11 responden sebagai kelompok kontrol. Uji beda dua mean antar kelompok menggunakan uji Paired T test. Terdapat perbedaan skala nyeri antara kelompok aroma terapi lavender dengan kelompok kontrol p value 0,000. Kesimpulan dari penelitian ini adalah: terdapat pengaruh antara teknik Aroma Terapi Lavender terhadap penurunan nyeri Post SC.

Kata kunci : aroma terapi lavender, perawatan post seksio sesarea, nyeri

BACKGROUND

A number of *Caesarean section* in Indonesia increase both in public hospitals and private hospitals. Based on national survey in 2007, a number of caesarean section childbirth in Indonesia were 22,8% or 921.000 from 4.039.000 childbirth cases (Risksdas, 2010).

Whalley (2008) explains that *Caesarean section* surgery causes pain and changes in tissue continuity. The surgical action of *Caesarean section* uses anesthesia and patients will not feel pain at the time of surgery. However, after the surgery is complete, patients begin to wake up and the anesthetic effect disappears and therefore they will feel pain in the incision area that makes them uncomfortable. The feeling experienced by *Caesarean section* post-operative patients can lead the risk of complications in infants as well as in mothers. In a study conducted by Annika Karlström, et.all in 2007 on Swedish women who were undergoing caesarean section, both emergency or elective, during the first 24 hours the pain was counted and be reported by patients. Seventy-eight percent of women claimed pain on a scale of 4 by Visual Analog Scale or even more, which can be seen as unadequately treated pain.

Post Caesarean section mothers will feel pain and the impact is limited mobilization, disrupted *Activity of Daily Living* (ADL), and unfulfilled bonding attachment and Early Breastfeeding Initiation (IMD). This results in the less response of mothers to their babies, thus breast milk as the best food for the baby cannot be optimally given (Purwandari, 2009).

Adequate post operative analgesia after caesarean section (CS) is vital as it impacts the distinct surgical recovery requirements of the parturient. Although newer analgesic modalities and drugs for post-caesarean analgesia have been introduced over the recent years, review of the literature suggests that we are far from achieving the goals of optimum post-operative analgesia. In

Indonesia where Caesarean section procedure commonly uses regional/spinal anesthesia, ketamine is found useful compared to other drugs. Giving Ketamine will be taped off for 24 hours post surgery. Several non pharmacological managements are needed as complementary treatments to minimize post-caesarean pain (Kerai, Sukhyanti, 2013). Common complementary therapy for patients are meditation, autogenic exercise, progressive relaxation exercise, guided imagery, rhythmic breathing, operant conditioning, biofeedback, fostering therapeutic relationships, therapeutic touch, cutaneous stimulation, hypnosis, music, acupressure, aromatherapy (Sulistiyowati, 2009).

In Ajibarang hospital, a pharmacological approach is applied to manage pain. The nurses usually give analgesic (1 amp ketorolac injection), however the continuous use of analgesic can lead to drug addiction. Although patients have been given analgesic, they still feel pain. Hence, it needs combination between pharmacological and non-pharmacological treatment to control or reduce pain.

Aromatherapy used to cure problems for respiratory problems, pain, disorders of the channel, disorders of the genitals, as well as mental and emotional problems. This happens because aromatherapy is able to provide sensations that satisfy the self and the brain, as well as perceived stress (Laila 2011).

Based on the background and previous studies, the researchers are interested in discussing "the effectiveness of lavender aromatherapy technique on pain reduction of *Post Caesarean section* patients in Ajibarang hospital".

The previous research revealed the effectiveness of lavender aromatherapy on pain reduction of post partum in normal patients with P value 0,01 in Purbalingga hospital (Titin, Haniyah S, 2015) therefore this study was aimed to determine the effectiveness of lavender aromatherapy on pain reduction

of post caesarean section patients in Ajibarang hospital. Specifically, this study aimed to find out the differences in pain scale before and after and to analyze the influence of lavender aromatherapy on pain reduction of *Post Caesarean section* patients.

METHOD

This study was conducted at postpartum unit in Ajibarang hospital. The researchers applied quasi experimental pretest posttest design with the control group. The number of ethical clearance is : B/LPPM-SHB.35.a/0316 The research design is illustrated as follows.

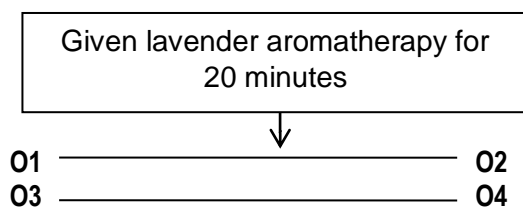


Figure 1. Research Design

Explanation :

- O1 : Treatment Group (KP 2) Pain Level before lavender aromatherapy treatment
- O2 : Treatment Group (KP 1) Pain Level after lavender aromatherapy treatment
- O3 : Control Group (KK) Pain Level without treatment;
- O4 : Control Group (KK) Pain Level Measurement without treatment.

The samples of this study were postpartum patients undergoing labor treated by caesarean section at postpartum unit in Ajibarang hospital. The researchers decided inclusion criteria of the sample selection including, patients were willing to be the respondents of post-operative care of caesarean section, first time caesarean section, and undergone day-0 post caesarean. All of samples recieved standardized medication from obstetrician, mefenamat acid 500 mg three times a day.

The sample size was determined by the formula of experimental study or clinical trials with control group. The samples of this study were 22 respondents

divided into 2 groups; 11 respondents were treated using lavender aromatherapy and the rest were the control group.

The technique used was accidental sampling technique in which every post-operative caesarean section patient treated at postpartum unit in Ajibarang hospital were invited to the study.

A. Variable

The observed variables are as follows.

1. Independent Variable: Give lavender aromatherapy oil by preparing a furnace and adding 3 drops of lavender oil together with one cc of water into a cup on a furnace, lighting a candle, and keeping it for about 15-30 minutes. The measurement instrument used was observation sheet in the form of lavender aromatherapy checklist. The results of the measurement were categorized into two; treated with aromatherapy and untreated with aromatherapy, with a nominal measurement scale.

2. Dependent Variable: *Post Caesarean section* pain describes as a parameter to assess an unpleasant sensory and emotional associated with tissue damage on post-operative SC mothers. This study used numeric rating scale to measure pain post Section Caesarea two times. The assessment result was the average of the measurement result and the scale of measurement was ratio.

B. Data Collection Technique

The study was conducted from April to July 2016 in Ajibarang hospital. The technique of data collection was the assessment of pain scale on post caesarean section before and after lavender aromatherapy treatment for 24 hours, recorded with Numeric Rating Scale. The Lavender aromatherapy applied into a piece of aromatherapy candle which is burn and attached to the mother's bed. Whereas the control group was in the different room, recieved a regular treatment.

The researchers only did an intervention during the time of collecting

the data, while the research assistants measured the pain scale using *Numeric Rating Scale* both before and after treatment. The research assistants were midwives in Ajibarang hospital.

C. Data Analysis

The methods of analyzing the data were univariate and bivariate analysis. Univariate analysis consists of mean, modus, median, minimal and maximum value, standard deviation, variance, distribution, proportion of patient characteristics, and pretest posttest.

Bivariate analysis was also applied to find out the difference of pain scale for the control group, paired T test was used for the intervention group, while independent T test was used to compare between control and intervention group.

RESULT

Table 1. Frequency Distribution of Characteristics of the Respondents

| Ages | f | % |
|------------------|----|------|
| 17-35 years | 20 | 91 |
| >35 years | 2 | 9 |
| Total | 22 | 100 |
| Obstetric status | f | % |
| Primipara | 12 | 54.5 |
| Multipara | 10 | 45.5 |
| Total | 22 | 100 |
| Groups | f | % |
| Therapy | 11 | 50 |
| Control | 11 | 50 |
| Total | 22 | 100 |

Table 1 shows that almost of respondents were aged 17-35 years old (91%) and half of the respondents are primipara (54.5%). Only 45.5% of respondent are multipara.

Table 2. The Pain Scale of Post Section Caesarea Mothers Before And After Lavender Aromatherapy Treatment in Ajibarang Hospital, Banyumas

| Category | Median | Mean | Min-max | Sig. |
|----------|--------|------|---------|-------|
| Before | 7 | 6.81 | 6-8 | 0,000 |
| After | 6 | 5.72 | 5-6 | |

From the table above, it can be seen that the average scale of pain on post-operative care of SC before lavender aromatherapy treatment was 6.81 and decreased after being treated with lavender aromatherapy (5.72). In addition, 8 respondents (72.7%) experienced severe pain before lavender aromatherapy treatment and 11 respondents (100%) felt moderate pain after being treated with lavender aromatherapy. The result with dependent T test describes that *p-value* is 0,000.

Table 3. The Effectiveness of Lavender Aromatherapy Technique on Pain Reduction of Post Section Caesarea Patients in Ajibarang Hospital, Banyumas

| Group | df | Mean | F | Sig. |
|---------------------------|----|-------|-------|-------|
| Therapy and Control Group | 2 | 4.727 | 19.50 | 0.000 |

The result with independent T test showed that *p-value* is 0,000 which means that there was an influence of lavender aromatherapy technique on pain reduction of post SC.

DISCUSSION

In this study the age range was chosen that is, ages 17-35 years to get it minimize bias due to age. This is in accordance with Manuaba (2008) that mothers aged 20-35 years are physically and psychology ready for pregnancy and childbirth. From table 1, majority of respondents were 17-35 years old (91%). A too young and too old women complain the level of pain differently. The older labor age, the more they tolerate the pain. In addition, Davim et al (2007) stated that age is related indirectly with pain labor because it affects someone's emotions and influences expectations during labor delivery.

Pain during childbirth experienced by multipara mothers (45.5%) may decrease pain scale. This experience can change the patient's sensation of pain. Previous labor experience related to pain in and post-natal with or without caesarean section can help mothers

manage the pain better. This is in line in Nursalam's opinion (2015) that another factor causing pain is perception and individual tolerance of pain, threshold pain, environmental, age, past experience, culture, trust, and stress. As long as this factor has a strong influence for individuals than pharmacological therapy, non-pharmacological therapy is needed to improve individual abilities in doing post pain management maternity (Lisa et al., 2017).

Aromatherapy boosts the release of neurotransmitters like enkephalin and endorphin that have analgesic and calm effects. Other released neurotransmitters can improve mood. The analgesic effect of essential oils in a holistic approach related to chronic pain management can be used as an alternative to a conventional treatment. Lavender oil aromatherapy is also known as sedative oil that has sedative effect from *lavandula angustifolia* as it contains of coumarin compound (Ogan, 2005). Some drops of lavender oil reduce insomnia, improve one's mood, and give a relaxation effect (Snow, 2006). Giving a relaxation effect can improve endorphin hormone, so the quality and intensity of pain decreased. Aromatherapy is commonly applied through inhalation of essential oils that can give calm and relax effects, release endorphin hormone, and stimulate the release of oxytocin hormone that plays a major role in the contractions of labor.

CONCLUSION

The influence of lavender aromatherapy technique on pain reduction of *Post Section Caesarea* patients was found in this study.

REFERENCES

- Batubara. (2008). *Hubungan Pengetahuan, Nyeri Pembedahan Sectio Caesaria Dan Bentuk Puting Dengan Pemberian Air Susu Ibu Pertama Kali Pada Ibu Post Partum*. Jurnal Keperawatan Soedirman (The Soedirman Journal of Nursing)
- Berman, A, et.al. (2009). *Buku Ajar Praktik Keperawatan Klinis (Ed. 5)*. Jakarta : EGC.
- Davim RMB, Torres GV, Melo ES. (2007) Nonpharmacological strategies on pain relief during labor: pre-testing of an instrument. *Rev Latino-Am Enfermagem*.
- Farrer, H. (2011). *Perawatan Maternitas (Ed. 2)*. Jakarta : EGC
- Karlström, Annika. (2007). *Postoperative Pain After Cesarean Birth Affects Breastfeeding and Infant Care*, [https://www.jognn.org/article/S0884-2175\(15\)33693-5](https://www.jognn.org/article/S0884-2175(15)33693-5). Diakses tanggal 22 November jam 19.30
- Kerai, Sukhyanti Saxena, Kirti Nath 1 and Taneja. Bharti. (2013). *Post caesarean analgesia: What is new?* <https://www.ncbi.nlm.nih.gov/p/articles/PMC5372400/>. Diakses 29 September 2013 jam 21.31 wib
- Laila. (2011). *Buku Pintar Menstruasi*. Yogyakarta: Bukubiru
- Liana, E. (2008). *Teknik Relaksasi : Genggam Jari untuk Keseimbangan Emosi*. <http://www.pembelajar.com/teknik-relaksasi-genggam-jari-untuk-keseimbangan-emosi> Diakses 21 Oktober 2013 Jam 08.22 WIB
- Lukman, TV. (2013). *Pengaruh Teknik Relaksasi Nafas Dalam Terhadap Intensitas Nyeri Pada Pasien Post Operasi Caesarean section Di RSUD Prof. Dr. Hi. Aloi Saboe Kota Gorontalo*. <http://kim.ung.ac.id/index.php/KIMFIKK/article/viewFile/2859/2835> Diakses 23 November 2013 Jam 10.07 WIB
- Mochtar, R. (2008). *Sinopsis Obstetri*. Jakarta : EGC
- Notoatmodjo, S. (2010). *Metodologi Penelitian Kesehatan*. Jakarta: Rineka Cipta.

- Pinandita. (2012). *Pengaruh Teknik Relaksasi Genggam Jari Terhadap Penurunan Intensitas Nyeri Pada Pasien Post Operasi Laparatomi*. <http://digilib.stikesmuhgombong.ac.id/files/disk1/27/jtstikesmuhgo-gdl-iinpinandi-1344-2-hal.32--3.pdf>
Diakses 21 Oktober 2013 Jam 09.56 WIB
- Prawirohardjo, S. (2009). *Ilmu Kebidanan*. Jakarta : PT. Bina Pustaka
- Purwandari. (2009). *Pengaruh Terapi Latihan Terhadap Penurunan Nilai Nyeri Pada Pasien Post Caesarean section*. Skripsi, Universitas Muhammadiyah Surakarta. Skripsi. Tidak Dipublikasikan
- Puwahang. (2011). *Jari-jari tangan*. <http://titik-refleksi-pada-tangan>
Diakses 29 Oktober 2013 Jam 12.44 WIB.
- Riset Kesehatan Dasar. Riskesdas (2010). Jakarta : Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI
- Simkin. (2008). *Paduan Lengkap Kehamilan, Melahirkan, Dan Bayi*. Jakarta: Arcan
- Sulistiyowati. (2009). *Efektifitas Terapi Aroma Lavender Terhadap Tingkat Nyeri Dan Kecemasan Persalinan Primipara Kala I Di Rumah Sakit Dan Klinik Bersalin Purwokerto*. Skripsi. Tidak Dipublikasikan.
- Titin, Haniyah S (2015) *Efektivitas Aroma Terapi Lavender terhadap intensitas nyeri post Partum Normal di RSUD Goetheng Taruna Dibrata Purbalingga* Skripsi. Tidak Dipublikasikan.
- Sumanto, H dan Rozak, M. (2009). *Perbedaan Teknik Distraksi Mendengarkan Musik Klasik Dengan Teknik Relaksasi Nafas Dalam Terhadap Penurunan Nyeri Pada Klien Post Operasi Secsio Caesarea Di RSUD Kraton Kabupaten Pekalongan*. Skripsi. Tidak Dipublikasikan
- Widyanto, F. (2012). *Perbedaan Injeksi Im Gluteal Pada Posisi Lateral Dan Tengkurap Terhadap Tingkat Nyeri Akseptor Kb Suntik Di Bidan Praktik Swasta Nastiti Wilayah Kerja Puskesmas Kebasen Banyumas*. Skripsi, Universitas Jenderal Soedirman
- Wong, D.L. (2008). *Essential Of Pediatric Nursing*. Philadelphia : Mosby.Co