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The Effect of Lavender Aromatherapy on Postpartum Blues of Primipara Mothers : A Scoping Review

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ABSTRACT

Background: The concept of health technology assessment is described in health studies as promotion, prevention, screening, comparison, treatment, rehabilitation and care for a long time. Documentation of the incidence of postpartum blues is still rarely done through health care facilities in Indonesia. Based on previous research, the incidence of postpartum blues is in the range of 74.4%. This situation needs attention because 10-15% could potentially develop into postpartum depression. Lavender aromatherapy has an active ingredient, namely linalool which has a relaxing effect so that it can relieve insomnia, anxiety, and depression.

Purpose: This Scoping Review was to evaluate the influence of lavender aromatherapy towards postpartum blues on primipara mothers.

Method: Scoping Review which adapts Arskey and O'Malley framework using databases from Pubmed, ScienceDirect, ProQuest. Selection of article studies with Prism Flowcharts, mapping of charting data and descriptions of article search flow, compilation, summary and reporting of results as well as discussions with Critical Appraisal. The tool used in the scoping review is the Mixed Method Appraisal Tool (MMAT).

Conclusion: The research gap found was the effect of lavender aromatherapy as an alternative non-pharmacological method that was effective on the incidence of postpartum blues in postpartum mothers.

Keywords: *Lavender aromatherapy, Postpartum Blues, Primipara.*

BACKGROUND

Postpartum blues usually appear starting from the initial hours after labor or the first week after labor (3-5 days) (Redshaw & Henderson, 2013). The factors which tend to occur on primipara mothers strongly related to the history of labor with long duration which previously was never experienced, the fatigue physically, the task and first responsibilities to be primipara women to take care of her first child (Bouya et al., 2018).

The occurrence which occurs and categorized into quite high, one of which is postpartum blues for primipara mothers. In line with the research by Mulyati and Khoerunisa, 2019 which stated that the number of postpartum blues occurrence reached 61,5% with the meaning of the symptoms in majority still frequently experienced especially by primipara mothers (Octavia et al., 2021). Primipara mothers are a mother who gives birth for the first time. This makes here difficult to adapt with her new role. Twenty five percent (25%) of primipara mothers experience severe postpartum blues (PPD) (Inke, 2021).

Based on the research (Keshavarz Afshar et al., 2015), Aromatherapy could control the form of limbic in the brain as the center of emotion, heart situation, and memory to obtain neuro endorphin hormon and the brain functions as eliminator of pain area felt as the signal transmitter among neural network and has the effect of minimizing sense of emergency, pressure, and also the worry of giving birth. *Lavandula* has the effect of peaceful condition. *Lavandula* fragrance could provide peaceful sense, equality, peace, freedom feeling then certainty. Besides, *lavandula* can minimize the feeling of pressed, full of pressure, pain, feeling of well irregular, hysteria, loneliness, and stuttering (Chen & Chen, 2015).

Postpartum blues is a syndrome that appears in mothers who have just given birth. The birth of a first child is an extraordinary experience for women. There are difficult times and emotional stress for primiparous mothers. So that fear and worry always accompany primiparous mothers. These worries and fears fall into the category of mild depression or commonly known as the postpartum blues. The signs of the postpartum blues are depression, crying, irritability, anxiety, unstable feelings. This risk will be greater for primiparous women because there is no previous experience. Postpartum blues signs appear from day 3 to day 6 postpartum (Mesches et al., 2005).

The incidence of postpartum blues entered a fairly high range, namely 74.4%. This situation needs a serious response because 10-15% can go up to postpartum depression. Mothers who experience postpartum blues can certainly interfere with new adaptation processes such as learning to care for their babies, self-healing efforts, learning a balanced nutrition menu and mobilization (Bohari et al., 2020a).

It is very essential to conduct efforts to treat postpartum depression because the achievement rate is till 13% related to suicide due to this, the higher the incidence, therefore the risk will increase if it is not handled properly (Hirokawa et al., 2021).

Aromatherapy is important to be used in complementary and alternative medicine (Toda & Matsuse, 2020). Lavender aromatherapy contains linalool which has a relaxing or calming effect. So that lavender aromatherapy is effective against postpartum blues (Karadag et al., 2017).

OBJECTIVE

This Scoping Review was to evaluate the influence of lavender aromatherapy towards postpartum blues on primipara mothers.

METHODS

The method used was scoping review. Based on Arksey and O'Malley in (Westphaln et al., 2021), it was obtained a number of stages including: Identifying research questions, identifying relevant studies, selecting articles, mapping data, compiling, summarizing and reporting the results and discussion (Westphaln et al., 2021).

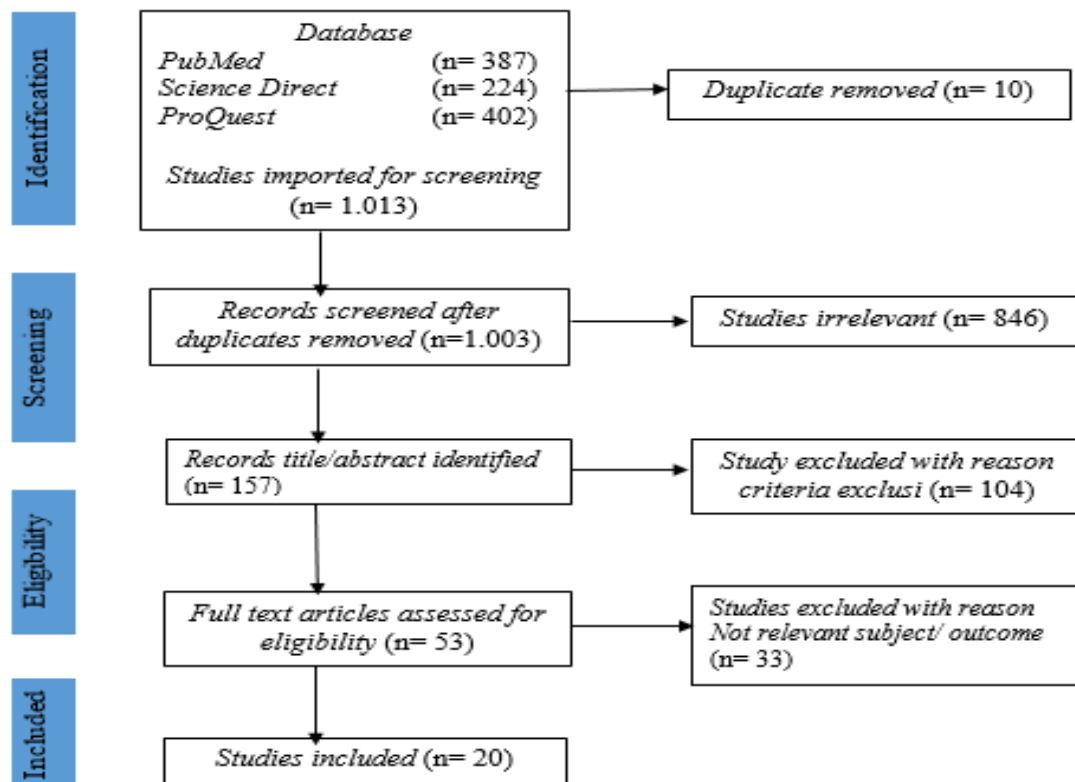
Dealing with the incidents which immediately investigated, the PEO framework was used to construct the scoping review questions.

Table 2.1 Framework of Population, Exposure, Outcome (PEO)

<i>P (Population)</i>	<i>E (Exposure)</i>	<i>O (Outcomes)</i>
Primipara Mothers	Lavender Aromatherapy	Postpartum Blues

Based on the scoping review questions above, the benchmark plans for the inclusion criteria are: articles from 2012 to 2021, articles in English and Indonesian, primary research, complete and accessible writing, articles discussing titles. Exclusion criteria: opinion articles and commentaries, letters and book reviews, articles with the type of literature review research and articles that are not related to the title, gray literature in the form of conference papers, conference proceedings, reports, theses or dissertations. The search sources used in this database were PubMed, Science Direct, ProQuest. Strategies include keywords or determined by Medical Subject Headings. The number of articles found and the filter process will be described in the (PRISMA) Flowchart. The PRISMA flowchart is below:

Bagan 2.1 PRISMA Flowchart



Of the 20 articles that have been selected then included into the charting data table. Further, a critical appraisal was undertaken to find out the quality of the selected articles. The tool used is the Mixed Method Appraisal Tool (MMAT). The MMAT was used to explore the risk of bias for the study level. (Ulley, Harrop, Ali, Alton, & Fowler Davis, 2019) Then, the quality of the articles was categorized with a grade scale of A (Good), B (Good enough) and C (Poor) to assess the quality of each article.

Table 2.5 Data Charting

No	Title/Author/Year	Country	Purpose	Research Type	Data Collection	Participant	Result
1	Lavender aromatherapy can decrease the intensity of perineum pain on postpartum mothers (Tabatabaeichehr & Mortazavi, 2020)	Indonesia	To find out the influence of lavender aromatherapy on the pain intensity of perineum stitches on postpartum mothers	Quantitative research quasi experiment with Pretest-posttest Control Group Design.	The data collection technique is with non probability sampling in the form of consecutive sampling	28 participants	There is pain decrease before and after giving lavender aromatherapy through inhalation to decrease the pain on postpartum mothers
2	Lavender aromatherapy decreases edinburgh score of postpartum depression scale on mothers with postpartum blues (Amin et al., 2021)	Indonesia	To find out the influence of lavender aromatherapy on EPDS Score of mothers with postpartum blues	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	Technique of data collection was by using non probability sampling method and purposive sampling method	28 participants	Lavender aromatherapy can decrease DPDS score of mothers who experience postpartum blues until it was effective to overcome postpartum blues occurrence
3	Effectiveness of lavender aromatherapy to decrease the anxiety of facing delivery on pregnant women at trimester III in the work area of Bergas Community Health Center (Rahman et al., 2018)	Indonesia	To decrease the anxiety of facing delivery on pregnant women at trimester III	Quantitative research pre experiment	The technique of data collection was by using sampling quota	15 participants	Lavender aromatherapy is effective to decrease the anxiety of facing delivery on pregnant women at trimester III at work area of Bergas Community Health Center.
4	Effect of Aromatherapy Using Bergamot and Lavender Oils on Postpartum Blues (Inke, 2021)	Indonesia	To compare the effectiveness of aromatherapy by using bergamot and lavender oil on postpartum blues	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	Technique of data collection used consecutive sampling. EPDS Questionnaire was used to diagnose postpartum blues.	40 participants	Aromatherapy was recommended in the 3 rd to 5 th days after caesar surgery.
5	The benefit of Lavender Aromatherapy and Chamomile Aromatherapy to overcome Perineum Pain on Postpartum mother (Zahra, 2013b)	Indonesia	To find out the effectiveness difference of giving lavender aromatherapy and chamomile on postpartum mothers in decreasing the perineum pain	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The data collection technique was accidental sampling.	34 participants	There is difference of before and after giving lavender aromatherapy and chamomile. Lavender aromatherapy was more effective than chamomile aromatherapy in decreasing

perineum pain on postpartum mothers

6	The effectiveness of lavender aromatherapy on sleep quality of postpartum mothers (Yazdkhasti & Pirak, 2016)	Indonesia	To find out the effectiveness of lavender aromatherapy on sleep quality of postpartum mothers.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The data collection technique was purposive sampling	34 participants	Lavender aromatherapy was effective on sleep quality of postpartum mothers
7	<i>Maternal social support, quality of birth experience, and postpartum depression in primiparous women</i> (Tani & Castagna, 2017a)	United States of America	To verify the influence of social support felt by the mother during pregnancy on the quality of delivery experience and depression after delivery	Quantitative research with longitudinal design	The technique of data collection was EPDS questionnaire to measure the result variable.	179 participants	Social support felt by the mother during pregnancy played important role as the protection factor on depression after delivery either directly or indirectly, decrease the negatively clinical aspect of delivery experience
8	<i>Professional support during the postpartum period: primiparous mothers' views on professional services and their expectations, and barriers to utilizing professional help</i> (Nan et al., 2020)	China	To explore the primipara mother's point of view in China about professional service, to utilize professional support, and to understand more the expectation and preference of mothers in giving professional service.	Qualitative research with descriptive phenomenology	The technique of data collection was semi structured interview	28 participants	a) Unsatisfaction with professional service to data for postpartum mothers b), Probable behavior of finding professional assistance of health treatment c) Highlighting the demand of the new health treatment service.
9	<i>Effects of Lavender Tea on Fatigue, Depression, and Maternal-Infant Attachment in Sleep-Disturbed Postnatal Women</i> (Peters et al., 2017)	China	To evaluate the effectiveness of lavender tea in decreasing sleep quality, fatigue, and depression in increasing the bond between mothers-infants during postpartum periode.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The techniques of data collection were PSQS, PFS, PBQ, and EPDS to measure the result variable.	80 participants	This study supported the popular claim of beneficial effect of lavender tea on fatigue, depression, and bound of mothers-infants in women after delivery.
10	<i>Lavender Fragrance Essential Oil and the Quality of Sleep in Postpartum Women</i> (Keshavarz et al., 2015)	Iran	To find out the effect of aromatherapy on sleep quality of postpartum women.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random clinical test with control group	158 participants	Effective aromatherapy in increasing mothers' sleep quality
11	<i>Effect of lavender scent inhalation on prevention of stress, anxiety and depression in the postpartum period</i> (Kianpour et al., 2019)	Iran	To investigate the effect of lavender on the prevention of stress, anxiety, depression of	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random clinical test with control group	140 participants	Lavender aroma during 4 weeks can prevent stress, anxiety, and depression after the labor.

postpartum in women.

12	<i>The Effects of Inhalation Aromatherapy with Rose and Lavender at Week 38 and Postpartum Period on Postpartum Depression in High-risk Women Referred to Selected Health Centers of Yazd, Iran in 2015</i> (Kianpour et al., 2019)	Iran	To evaluate aromatherapy efficacy in PPD	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random clinical test with control group	105 participants	This research gave valid evidence for the effect of aromatherapy on PPD. Therefore, the usage of aromatherapy can be recommended to women with high risk.
13	<i>The effect of aromatherapy with lavender essence on severity of labor pain and duration of labor in primiparous women</i> (Yazdkhasti & Pirak, 2016)	Iran	To find out the influence of inhalation of Lavender essence on delivery pain severity and duration of labor.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random clinical test with control group	120 participants	Aromatherapy of lavender essence can become the choice of effective therapy for pain management for women in the delivery.
14	<i>The effect of acupressure therapy on mothers with postpartum blues</i> (Bohari et al., 2020b)	Indonesia	To find out the potential of acupressure in decreasing EPDS score on mothers' postpartum blues.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was by using questionnaire (EPDS) to diagnose postpartum blues.	30 participants	Acupressure therapy done towards postpartum blues mothers decrease EPDS score in women.
15	<i>Endocrinological effect of lavender aromatherapy on stressful visual stimuli</i> (Toda & Matsuse, 2020)	Japan	To test the effect of lavender aroma on women watching stress video	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random divided into two groups	23 participants	Lavender aroma can remove stress.
16	<i>The Effect of Lavender Aromatherapy on the Symptoms of Menopause</i> (Nikjou et al., 2018)	Iran	To evaluate the effect of lavender aromatherapy on menopause symptom.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was random divided into two groups	100 participants	Using lavender aromatherapy to decrease menopause symptom.
17	<i>The effect of aromatherapy massage with lavender and chamomile oil on anxiety and sleep quality of patients with burns</i> (Rafii et al., 2020)	Iran	To find out the influence of aromatherapy massage using lavender aromatic oil and chamomile on anxiety and sleep quality of burns wound patients.	Quantitative research quasi experiment with <i>Pretest-Posttest Control Group</i> design	The technique of data collection was convenience sampling then divided into three groups	105 participants	Aromatherapy massage as the non-pharmacological and simple method can increase anxiety and sleep quality on burns wound.
18	<i>Effects of aromatherapy on sleep quality and anxiety of patients</i> (Karadag et al., 2017)	Turkey	To find out the influence of lavender essential oil on sleep quality and anxiety level of patients at coronary ICU.	Quantitative research Controlled research randomly	The technique of data collection was random divided into two groups	30 participants	Lavender essential oil increases sleep quality and decrease anxiety level on patients with coronary arteries.

19	<i>Aromatherapy: The effect of lavender on anxiety and sleep quality in patients treated with chemotherapy</i> (Özkaraman et al., 2018)	Turkey	To investigate the effect of lavender oil aromatherapy on anxiety and sleep quality on patients who runs chemotherapy	Quantitative research controlled try out randomly	The technique of data collection was random divided into two groups	70 participants	This study determines tat three dots of lavender oil inhaled every night before sleep decreases the anxiety of patients' trait and increase the sleep quality.
20	<i>Effects of lavender aroma on sleep Quality in healthy japanese students</i> (Hirokawa et al., 2021)	Japan	To examine the effectiveness of lavender aroma on Japanese students' sleep quality	Quantitative research with controlled research randomly	The technique of data collection was random divided into two groups	18 participants	The exposure of lavender aroma in the night, during sleep period, can cure subjective drowsiness when getting up.

RESULTS

Responding to the charting data, the found themes will be summarized in the table below:

Table 2.8 Mapping Theme

No	Theme	SubTheme	Article
1	The influence of lavender aromatherapy on primipara mothers with postpartum blues	a. Alleviating pain	1, 2, 5, 14
		b. Decreasing stress and anxiety	3, 8, 9, 15, 19, 20, 12, 13, 16, 17
		c. Helping the process of psychological recovery after delivery	4, 11
		d. Preparing the sleep pattern of postpartum mothers	6, 10, 18, 19, 20
2	Factors which influence social support for mothers with postpartum blues	a. Family support	7
		b. Support of surrounding environment	7
		c. Support of medical staff	8

The article comes from a developed country which contains 3 articles. From developing countries there are 17 articles.

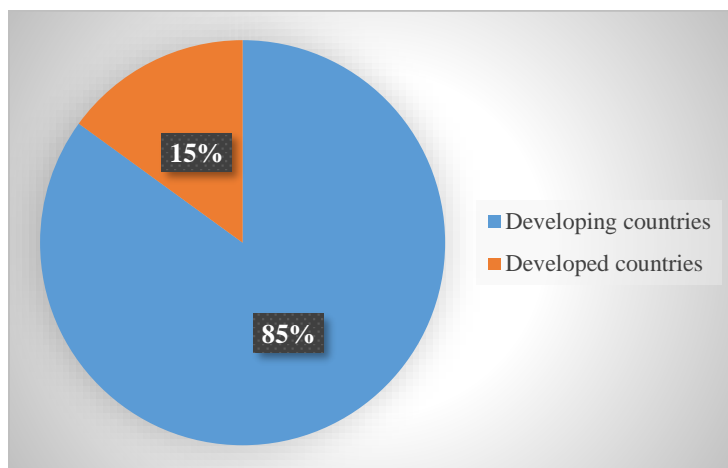


Figure 3.1 Characteristics of Country Name

The characteristics of the research method from 20 articles consist of 19 articles in quantitative studies and one article in qualitative studies.

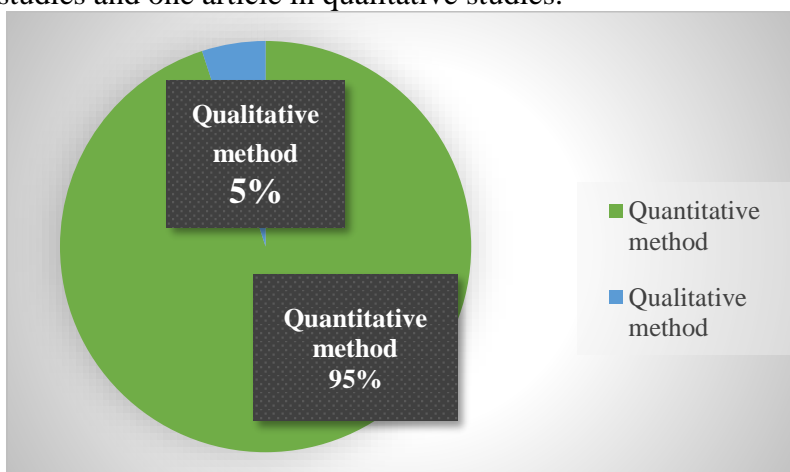


Figure 3.2 Characteristics of Research Method

Based on the articles reviewed, there were 15 articles with grade A and 4 articles with grade B for the quantitative method, while 1 article with the qualitative method had grade B. So, there were 5 articles in total grade B.

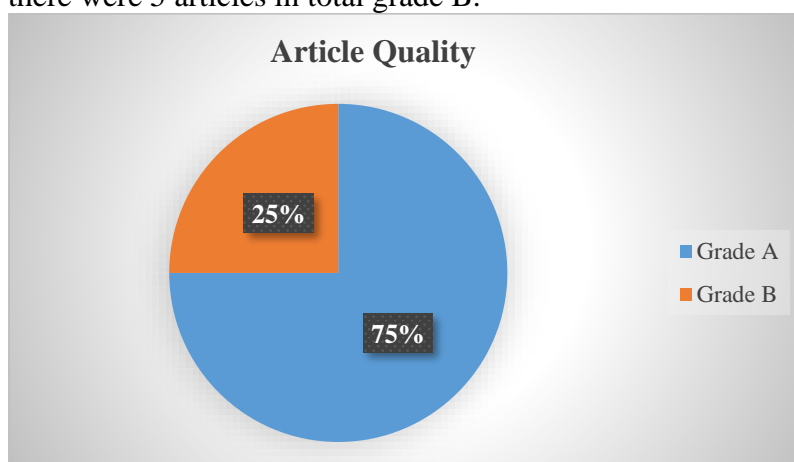


Figure 3.3 Characteristics of Article Quality

DISCUSSION

Dealing with the 20 selected articles, several themes from the scoping review were identified in all studies related to the effect of giving lavender aromatherapy which were divided into several sub-themes as follows:

1. The Effect of lavender aromatherapy on primiparous mothers with postpartum blues

a. Reduce pain

The benefits of giving aromatherapy to primiparous mothers with postpartum blues are related to pain reduction which explains that there are changes that occur before and after releasing recovery therapy with lavender inhalation to relieve pain for postpartum women (Ulley, Harrop, Ali, Alton, & Davis, 2019). Meanwhile, according to assert that the interference group was sent five drops of *lavandula angustifolia* in a bubble and then sucked for about fifteen minutes with a duration of 2 x (7 days) continuously for 4 weeks. The evidence for scoring points with EPDS screening shows that lavender is able to reduce pain in a complementary way in postpartum women. (Tani & Castagna, 2017b) have explained about the dissimilarity between the distribution of aromatherapy *lavandula* before and after, there were also results that it was proven that *lavandula* oil helped in complementary pain relief efforts for postpartum women. the results of the study argue that the experimental study used a pre-posttest one-group design. Complementary is used for postpartum women to reduce the pain.

b.Reduce stress and anxiety

During the puerperium, women who have just given birth often experience symptoms of mental disorders up to 85% (Pratiwi et al., 2021). According to (Pratiwi & Basuki, 2010) in the form of feelings of anxiety and stress when going through the childbirth process by providing lavender oil aroma therapy. So lavender aromatherapy oil is a suitable complementary alternative in reducing anxiety through childbirth. Meanwhile (Tanvisut et al., 2018) obtained the results of the lavender aroma being able to relieve anxiety and stress. When recovery therapy is given. This is in line with the results of recovery therapy, which is a non-pharmacological healing effort that can help reduce anxiety using lavender fragrance. It is in line with the reviewer on behalf of (Uzunçakmak & Ayaz Alkaya, 2018) who concluded that overcoming anxiety or worry can be in several ways, namely through pharmacology, for example anxiety drugs and non-pharmacological complementary therapies with lavender aromatherapy relaxation.

c. Help the psychological healing process postpartum.

Perineal pain causes changes in mobilization that have adverse consequences such as postpartum hemorrhage. Pain will cause discomfort. There are 2 ways, namely non-pharmacological and pharmacological treatment. Pharmacological often causes excessive side effects so that complementary therapies help healing efforts and have been proven to be effective in helping non-pharmacological recovery (Zahra, 2013a). It is in accordance with who argue that the use of recovery with pharmaceutical drugs often creates excessive effects, another alternative that can help from a complementary perspective is recovery therapy with essential oils. Healing efforts using lavender recovery therapy, when aromatherapy begins to be inhaled through the sense of smell, the content inside begins to awaken the hypothalamus gland to release the endorphin hormone. In addition, linalool and linalyl acetate as active substances are obtained from a mixture of *lavandula* oil which has an effect on the postpartum psychological healing process.

d. Improve postpartum mother's sleep pattern

In the article (Rahman, A.E., Perkins, J., Islam, S., 2018) the results of statistical tests found that there was potential before being given a lavender fragrance and after being given recovery therapy to influence and improve the sleep patterns of postpartum women in the experimental group, namely the acquisition of p value $(0.000) < (0.005)$. So, in the study tried to give recovery therapy a number of times a week. Lavender essential oil is able to improve and improve sleep patterns that occur in postpartum mothers. In line with determined that three drops of lavender oil inhaled every night before going to bed reduces the patient's level of anxiety and improves sleep quality and article 20 of the results of the study that exposure to lavender aroma in at night, during the sleep period can relieve subjective sleepiness upon awakening. It is commensurate with the acquisition of an article review from Mu'alimah, 2022, which also describes Aromatherapy from lavender flowers, which is included in a complementary therapy option to be able to cure insomnia.

2. Factors Affecting Social Support for Mothers with Postpartum Blues

In the article, it was found that the social support felt by the mother during pregnancy played an important role as a protective factor against postpartum depression, both directly and indirectly, reducing the negative clinical aspects of the birth experience (Hirokawa et al., 2021). Postpartum blues are events that affect the mother after giving birth and are often found early in the postpartum period. The starting point of the event is usually the first hours postpartum leading up to entering the day to day. Thus, the postpartum situation must obtain important support from the family and the immediate circle of the community. As health workers, it is necessary to increase education about the postpartum blues through counseling or guidance for women with symptoms of the postpartum blues so that early prevention can be done to overcome more severe problems such as postpartum depression. Dealing with Atsri, 2020, it has been explained about a number of postpartum women who did not experience the incidence of baby blues syndrome reaching 64.2% while those experiencing symptoms of baby blues syndrome were 35.8%. This incident stems from the support of the family system, society or internal scope that is not carried out will have the potential to experience the incidence of baby blues syndrome up to 18.2%, while postpartum women who receive family and social support are proven not to have experienced the incidence of baby blues syndrome as much as 81.8%. Therefore, mothers with postpartum blues, especially new mothers who give birth to their babies for the first time, they need big support partner, parents/family, friends and paramedic (Hirose, 2000)

CONCLUSION

The results of the identification of the effect of lavender aromatherapy on primiparous mothers, namely it can reduce pain, reduce stress and anxiety, help the postpartum psychological healing process, improve postpartum mother's sleep patterns. While the quite influential participation related to social support comes from family support, support from the surrounding environment and support from health workers.

The research gap used as a reference in future research is, it was found that the research method used more quantitative, articles discussing the effect of lavender aromatherapy on postpartum blues were more from developing countries. Therefore, it showed that the effect of lavender aromatherapy is one of the alternative non-pharmacological methods that are effective on the incidence of postpartum blues in postpartum mothers.

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