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Narrative Review of the Effect of Endorphin Massage and Oxytocin Massage on Pain Intensity in Maternity Women

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ABSTRACT

Background: Childbirth is the effort or process of expelling a full-term baby which is often accompanied by pain caused by contractions in the uterus. From the research results, it was foundthat 32% of 300 women who gave birth during the active phase experienced severe pain, 57% moderate pain, and 11% mild pain. Evidence shows that fear of vaginal childbirth and anxiety experienced by many women during their pregnancy. Therefore, it then led to their decision to choose other methods of birth such as Section Caesarea (SC). The effects of anxiety during labor could potentially result in excessive levels of catecholamines causing decreased blood flow to the uterus, decreased uterine contractions, decreased blood flow to the placenta, decreased oxygen available to the fetus, and can increase the length of labor. One of alternative methods of dealing with pain during the labor process is using non-pharmacological such as endorphin massage and oxytocin massage.
Purpose: The aim of this literature study was to present information about the effect of endorphin massage and oxytocin massage on the intensity of pain among mothers giving birth.
Methods: This research method was a literature review study. Journal searches were carried out by applying online database such as ScienceDirect, Google scholar, Pubmed, Scopus, Portal Garuda. Articles were selected based on inclusion and exclusion criteria.
Result: The study investigated the influence of endorphin and oxytocin massages on pain intensity in maternity mothers during childbirth, revealing a significant reduction in pain levels following the administration of these massages. Both endorphin and oxytocin massages were found to alleviate pain, induce relaxation, and promote feelings of comfort and calmness, thereby facilitating a smoother birth process.
Conclusion: The influence of endorphin massage and oxytocin massage is useful in reducing pain in maternity mothers.

Keywords: *endorphin massage; oxytocin massage; labor pain*

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BACKGROUND

From the research results, it was found that 32% of 300 women who gave birth during the active phase experienced severe pain, 57% moderate pain, and 11% mild pain. According to Root et al, as many as 68.3% of women feel that pain during labor is severe pain, and more than 86% of women want the pain felt during labor to be resolved (Cheng et al., 2016). The pain that occurs during labor starts from the beginning of labor until the moment it is fully opened and can last for 12-18 hours, then continues when the fetus is expelled until the placenta is expelled (Herinawati et al., 2019). The effects of anxiety during labor can cause decreased blood flow to the uterus, decreased uterine contractions, decreased blood flow to the placenta, decreased oxygen available to the fetus, and can increase the length of labor. Pregnant women's anxiety about their birth makes them switch to using the Sectio Caesarea (SC) method to carry out their birth, assuming they will not feel pain during birth. According to data from the World Health Organization (WHO), the average standard for the incidence of CS is 5-15% per 1000 births in the world as a delivery effort to save the baby in the womb (Li et al., 2014).

During childbirth, efforts to manage pain are something that caregivers must pay attention to. If pain management is neglected by birth attendants, it can result in a bad birth for the mother and result in a feeling of trauma during childbirth (Rahmawati & Ningsih, 2019). Pain that occurs when causing hyperventilation, thereby increasing oxygen demand and increasing blood pressure. Pain is caused by the process of cervical dilatation, hypoxia of the uterine muscles during contractions, stretching of the lower uterine segment and compression of the cervical nerves. Pain originating from the lower abdomen spreads to the lumbar pelvis and down to the thighs (Blanks et al., 2020). Labor pain is a normal thing, but excessive pain can also interfere with labor. There are various methods for treating pain that can be used, namely in the form of pharmacological pain management (using drugs) and non-pharmacological (without using drugs) (Fogarty et al., 2023).

Non-pharmacological methods are said to be more profitable because there are no side effects and the method is simpler and gives satisfaction to the mother during the birth process (Gayeski et al., 2015). One method of dealing with pain during the birth process using non- pharmacological methods is the massage method, including endorphin massage and oxytocin massage. This massage method can be used as an alternative to deal with pain during childbirth. Endorphin massage is a massage done with a light touch and is important to give to pregnant women, before and during childbirth. Massage can stimulatethe body to release endorphin compounds. These endorphins are also known as pain relievers and provide a feeling of comfort (Tanjung & Antoni, 2019a).

From the results of research conducted by Susanti (2022), in patients who were given endorphin massage there was a decrease in the pain scale. It can be seen from the conditions before and after the treatment was given, where before the endorphin massage was given the mother felt very severe pain, the pain that the mother felt could be seen in the mother's facial expression which looked like she was enduring the pain. After being given a massage, the mother appeared to experience changes regarding the pain she felt (Susanti,

2022). Oxytocin massage is a massage/technique for reducing labor pain with a light touch or massage on the spine starting from the 5-6th rib to the scapula used to reduce discomfort during labor (Sartika et al., 2023). Oxytocin massage has good benefits, especially for mothers giving birth because it can reduce the pain and tenderness felt during the birth process15. Labor painis a normal event, but if labor pain cannot be handled properly it will cause other problems, the mother feels anxious and worried about childbirth so that the hormone adrenaline increases and vasoconstriction occurs causing the mother's blood flow to the fetus to decrease (Putri et al., 2022).

According to research by Wijaya et al, (2018), there is an effect of oxytocin massage on women giving birth but it has no effect on the progress of labor. It can be seen that pain in the group given oxytocin massage decreased, as evidenced by thedecrease in the number of respondents in the moderate pain category, from 57.1% during the pre-test to 36.7% during the post-test, and respondents in the pain category. weight from 14.3% during the pre-test to 0% during the post-test. So it can be concluded that oxytocin massage can reduce the intensity of pain in women giving birth (Wijaya et al., 2018).

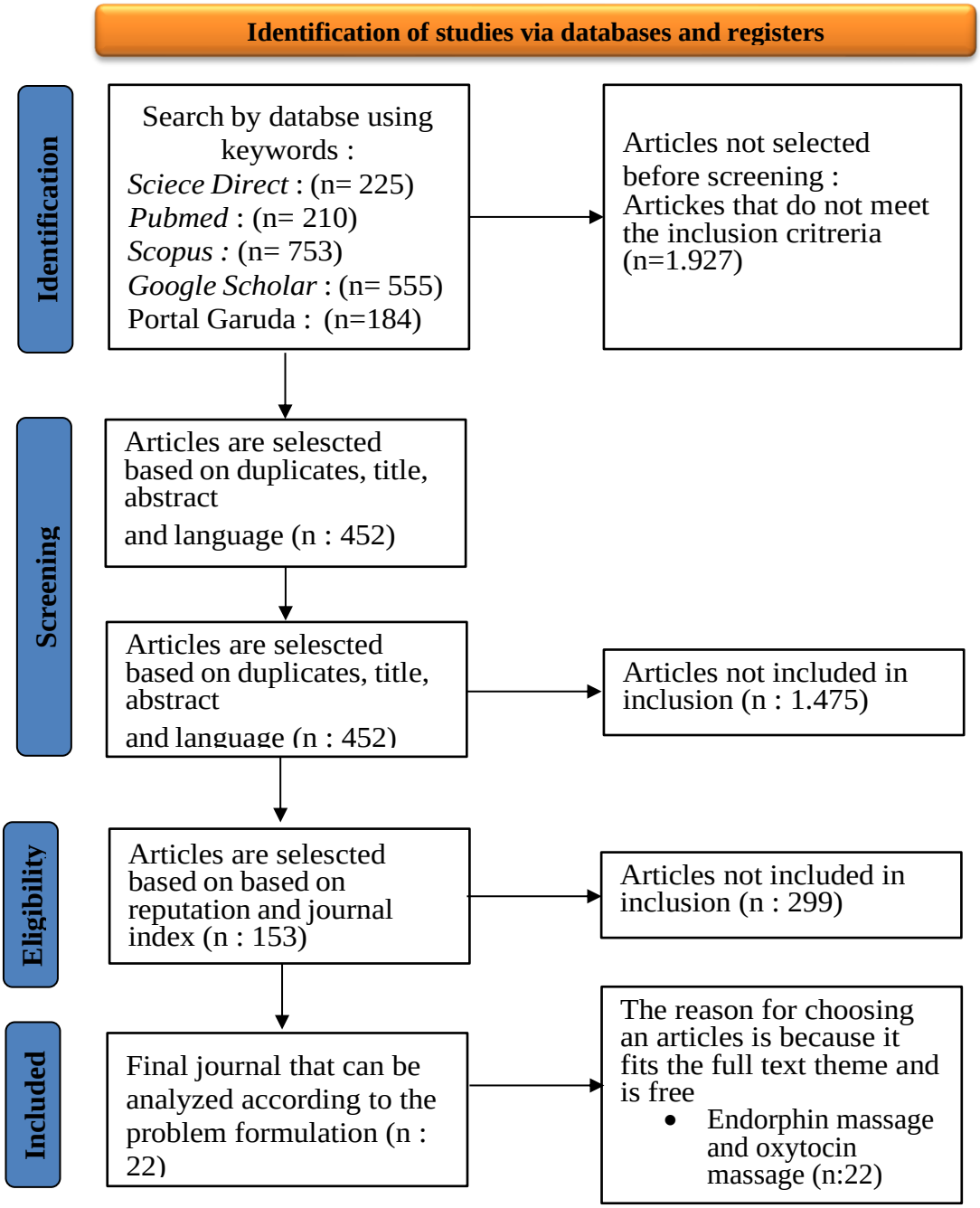
OBJECTIVE

Based on the description above, researchers are interested in conducting systematic review research on "The Effect of Endorphin Massage and Oxytocin Massage on Pain Intensity in Maternity Women".

METHODS

The method used in writing this article is narrative literature review. This literature study was conducted from Januari 2023 to Desember 2023. Data collection was carried out through four database; ScienceDirect, Google scholar, Pubmed, Scopus, Portal Garuda. The keywords used in the journal search are “endorphin massage” OR “oxytocin massage” OR “massage” AND “labor pain” AND “pain intensity” in English and Bahasa.

The inclusion criteria for journal searches are full text journals that discuss the topic of influence of endorphin massage and oxytocin massage on pain intensity in maternity mothers, journal in full text form, English language international journals indexedby Scopus, Indonesian language national journals indexed by SINTA 1, 2, 3, &4 and year of publication 2017-2023. Meanwhile, the exclusion criteria for journal searches are paid journal and Journal that discusses endorphin massage and/or oxytocin massage which is associated with functions that are not related to pain during childbirth.



Figue 1. Prisma diagram of kournal selection steps

RESULTS

A comprehensive literature review was conducted across four databases, resulting in the identification of 22 relevant articles from 18 journals that met the predetermined inclusion criteria. Among these, 11 articles investigated the efficacy of endorphin massage in alleviating pain intensity among maternity mothers, while 6 articles explored the variances in pain reduction following the administration of endorphin massage. Additionally, 4 articles delved into the impact of oxytocin massage on mitigating pain intensity in maternity mothers, with 1 article specifically examining disparities in pain reduction subsequent to oxytocin massage administration. This analysis underscores the growing body of research surrounding the use of both endorphin and oxytocin massages as potential interventions to alleviate pain during childbirth, and highlighting the need for further exploration in this domain.

Table 1. Data Charting

No.	Title/Author /Year	Country	Objective	Method	Result
1.	Effectiveness Deep Back Massage and Massage Endorphin Against Intensity of Pain in Active Phase I in BPM Setia **(**Dewie & Kaparang, 2020)	Indonesia	To determine the effectiveness of the Deep Back Massage and endorphin massage methods on pain intensity during the first active phase	pra eksperimen	There is a significant difference in the average labor pain during the first active phase before and after the endorphin massage
2.	Effect Of The Birthball Method And Massage Endorphin On The Intensity Of Labor Pain (Hairunnisyah & Retnosari, 2022)	Indonesia	To determine the effect of the birth ball method and endorphin massage on the intensity of labor pain	Quasy experimen	There is a reduction in pain felt by mothers giving birth after giving endorphin massage

3.	The Effect of Endorphine Massage on the Pain Intensity Scale in Normal Primipara Inpartu Mothers at First Stage in Pmb Bengkulu City, 2020 (Savitri et al., 2021)	Indonesia	To determine the effect of endorphin massage on the pain intensity scale in mothers giving birth normally in the first stage	quasi experiment designs	Shows that there is an influence of endorphine massage on the pain intensity scale in normal primiparous women giving birth in the first stage in PMB Bengkulu City.
4.	The Effect of Endorphine Massage Therapy Combination of Birthing Ball on the Intensity of Labor Pain in the First Stage of the Active Phase in Mothers in Birth (Iryani et al., 2022)	Indonesia	to determine the effect of endorphine massage therapy combined with a birthing ball on the intensity of labor pain during the first active phase	True ekperimental	There were differences in the intensity of labor pain in both the intervention group and the control group with changes in pain intensity that were not so significant in the control group compared to the intervention group.
5.	The Effectiveness of Deep Breathing and Endhoprine Massage on Pain Intensity in the First	Indonesia	To determine the effectiveness of deep breathing techniques and endorphin massage on the intensity of pain during the first	Quasy-Experimental Design	Shows that both deep breathing techniques and endhoprin massage have the same effectiveness in reducing pain levels in mothers

	Stage of the Active Phase of Labor at the Tanah Abang District Health Center for the January 2020 Period (Adam et al., 2020)		active phase of labor in mothers giving birth		giving birth during the first active phase.
6.	The Effect of Oxytocin Massage on Pain and His Frequency, His Duration in Inpartu Mothers at Bpm Asri Tuban (Qonitun & Qiftiyah, 2021a)	Indonesia	To determine the effect of oxytocin massage on pain and frequency of HIS, duration of HIS in postpartum mothers	pra-experimental	Oxytocin massage can be applied by midwives in implementing midwifery care. Oxytocin massage can reduce labor pain, thereby minimizing the risk of maternal death during childbirth.
7.	Effect Of Giving Endorphin Massage to Pain Scale Mother Happy In Bps Lu'luatul Mubrikoh, S.St Bangkalan (Firdaus, 2019)	Indonesia	To analyze the effect of giving endorphin massage on the maternal pain scale	pre-experimental	Shows that there are differences in the scale of labor pain before and after giving endorphin massage to mothers giving birth at BPM Lu'luatul Mubrikoh, S.ST Bangkalan
8.	The Effect of Endorphin Massage on	Indonesia	To determine the effect of endorphin	Quasi eksperimen	There was an influence of pain intensity on

	First Stage Pain Intensity in Primiparous Mothers (Khairunnisa et al., 2023)		massage on the intensity of pain in the first stage in primiparous mothers		endorphin massage before 5 minutes and after 5 minutes of endorphin massage (p value 0.006 < 0.05) and there was an influence of pain intensity on endorphin massage before 15 minutes and after 15 minutes of endorphin massage. (p value 0.037 < 0.05).
9.	The Effect of Endorphin Massage on Reducing the Intensity of Labor Pain in the Active Phase of First Stage (Nurchasanah, 2022)	Indonesia	To find out whether there is an effect of endorphin massage on reducing the intensity of birth pain for the first sibling	qualitative research design with a case study approach.	Shows that there is an effect of endorphin massage on reducing the intensity of labor pain during the first active phase
10.	Effectiveness of Endorphin Massage on the Intensity of Labor Pain in the First Stage of Labor in Mothers (Tanjung &	Indonesia	to identify the effectiveness of Endorphin Massage on the intensity of labor pain in the first stage of labor in women giving birth	quasi-experiment	Shows that there is a difference in pain intensity before and after endorphin massage on mothers giving birth

	Antoni, 2019b)				
11.	Effectiveness of Endorphin Massage and Counter Massage on the Intensity of Labor Pain in the First Stage (Karuniawati, 2020)	Indonesia	To determine the difference in the effectiveness of endorphin massage and counter massage in reducing the intensity of pain in the first stage of labor	pretest-posttest design	It was found that the intensity of labor pain after the procedure was carried out there was a significant decrease in the pain scale
12.	Comparison of Labor Pain in Mothers Who Get Oxytocin Massage and Endorphin Massage (Yanuar Eka Pujiastutik et al., 2021)	Indonesia	To determine the comparison of labor pain in mothers who receive oxytocin massage and endorphin massage	Quasy experiment	It was found that oxytocin massage was more effective in reducing labor pain than endorphin massage
13.	The Effect of Endorphin Massage on Pain Intensity in Birthing Women (Khasanah & Sulistyawati, 2020a)	Indonesia	Analyzing the effect of endorphin massage on the intensity of pain in mothers giving birth	Analytical research	There is an effect of giving endorphin massage on the intensity of labor pain
14.	The Effect of Oxytocin Massage on Labor Pain in Mothers Giving Birth at Permata Bunda	Indonesia	To determine the effect of oxytocin massage on labor pain	Quasy eksperimental	Oxytocin massage has the effect of reducing pain in labor, but has no effect on the progress of labor

	Hospital, Purwodadi, Grobogan Regency (Himawati & Kodiyah, 2019)				
15.	The Effect of Oxytocin Massage on Pain and Progress of Labor in Mothers Giving Birth at the Garuda Community Health Center	Indonesia	To determine the effect of oxytocin massage on pain and progress of labor in mothers giving birth	Quasy eksperimental	Oxytocin massage has the effect of reducing pain in labor, but has no effect on the progress of labor
16.	(Wahyuni et al., 2018)	Indonesia	To determine the effect of endorphin massage on the intensity of lower back pain in third trimester pregnant women	Pra-eksperimen	Shows that there is an influence of endorphin massage on the intensity of lower back pain
17.	Effectiveness of Oxytocin Massage in Reducing Labor Pain (Maros, 2021)	Indonesia	To see the side effects of giving oxytocin massage on the mother's pain before giving birth	Pre-experimental	It was found that there were differences in pain levels after being given oxytocin massage treatment between the intervention group and the control group
18.	The Effect of Endorphin	Indonesia	To determine the analysis of	Quasy experiment	There is a difference in

	Massage on Reducing the Intensity of Labor Pain at BPM Sagita Darma Sari Palembang in 2023 (Sari & Triani, 2023)		differences in pain intensity in the first stage of labor in the active phase before and after endorphin massage		reducing the intensity of pain in mothers in the first stage of the active phase before and after being given endorphin massage treatment.
19.	Application of Endorphin Massage to Reduce the Intensity of Labor Pain	Indonesia	To determine the effect of endorphin massage on the intensity of labor pain	Case study	Endorphin massage has been found to reduce labor pain in mothers giving birth with pain intensity
20.	The Effectiveness of the Combination of Endorphine Massage and Lemon Aromatherapy in Reducing Pain Intensity in Women in the First Stage of Labor (Apryanti & Astuti, 2020)	Indonesia	to identify a decrease in pain intensity in mothers who were given treatment and who were not given treatment using the endorphine massage and lemon aromatherapy methods.	Quasy Eksperimen	There is a decrease in the intensity of pain in mothers giving birth from endorphine massage and lemon aromatherapy.
21.	The Effect of Endorphin Massage on First Stage Labor Pain in the Taraju	Indonesia	to determine the effect of endorphin massage on pain during the first stage of labor	Correlational, quasi experimental approach	It was found that there was an effect of endorphin massage on the level of pain in the first stage of labor

	Community Health Center Working Area, Tasikmalaya Regency (Handayani et al., 2017)				
22.	The Effect of Endorphin Massage on the Intensity of Pain in the Normal Primipara Mother in BPS Ririn Dwi Agustin Jombang (Nufus, 2018)	Indonesia	To determine the effect of endorphin massage on the intensity of pain in the first stage of primiparous women who gave birth normally	Quasy experimental	There is an effect of endorphin massage on the intensity of pain in the first stage

DISCUSSION

1. The Effect of Endorphin Massage and Oxytocin Massage on the Intensity of Pain in Maternity Mothers

In an effort to reduce labor pain, there are various methods given to mothers givingbirth. One of them is the non-pharmacological method, giving massage. Massage has apositive effect on mothers who experience pain during labor by reducing stress hormones.Giving endorphin massage to birthing mothers is a form of relaxation to reduce pain/pain (Khasanah & Sulistyawati, 2020b).

Endorphin massage is a non-pharmacological therapy in the form of light touch given to pregnant women, from the time leading up to giving birth. The results of research conducted by Antik, regarding the effect of endorphin massage on the pain intensity scale during the first active phase of labor, data obtained from 23 respondents showed that the response experienced changes for the better, while 7 other people experienced no change. Of the 23 respondents who experienced a decrease in pain during the first stage of labor, it was concluded that endorphin massage was influential and effective in reducing labor pain (Nurkhasanah, 2021).

During the labor process, women who are given endorphin massage therapy will physiologically stimulate the release of endogenous analgesics (endorphins), thereby inhibiting the transmission of pain by increasing the circulation of neurotransmitters

produced naturally by the body at neural synapses along the central nervous system. Endorphins are associated with the parasympathetic membrane, inhibiting the release of substance P which can inhibit pain transmission, so that pain is reduced (Susanti, 2022). When touch and pain are stimulated simultaneously, the touch sensation travels to the brain while the descending control system stimulates the thalamus to secrete endorphins which close the gates for pain transmission in the spinal cord and affect the sympathetic nervous system, causing the sympathetic nervous system to decline. A decrease in the sympathetic nervous system can reduce muscle tension, reduce anxiety, and reduce pain (Chakti et al., 2022).

This is in line with research conducted by Fitriana et al 2017, there is an influence of pain intensity on massage endorphins before 5 minutes and after 5 minutes of massage (p value 0.006 < 0.05) and there is an influence of pain intensity on massage endorphins before 15 minutes and after 15 minutes of endorphin massage (p value 0.037 < 0.05). Research conducted by Diah Ayu et al, of the 62 respondents who conducted the research, it was found that almost half of all pregnant women respondents experienced severe pain, namely 9 people (45%) and the degree of lower back pain after endorphin massage was not reported by any of the respondents. experiencing severe pain (0%). Andit was concluded that there was an effect of giving endorphin massage on the intensity of lower back pain in third trimester pregnant women in the working area of the Putri Ayu Health Center, Jambi City (Susanti, 2022).

Reducing labor pain can be done using various non-pharmacological methods, for example by administering oxytocin massage. massage by giving a light touch to the spine starting from the 5-6th rib to the scapula which creates a relaxing effect. The relaxation experienced by the mother stimulates the brain to reduce levels of the hormone adrenaline and increase the production of oxytocin, which is a factor in producing adequate uterine contractions. The steps in carrying out an oxytocin massage must be carefully considered so that the massage produces an optimal effect (HIMAWATI & KODIYAH, 2020).

One of the steps that needs to be paid attention to is how to massage each mother with a different body posture, such as fat mothers who must be massaged with their palms clenched into fists, whereas for mothers with a thin or normal body, you can use the thumb of your left and right hand or the back of your left and right index finger. Apart from that, you also need to pay attention to the duration of the oxytocin massage, a good time for the massage is 3-5 minutes. According to research conducted by Merry et al, it shows that there are influences and benefits in reducing pain when mothers give birth, mothers can give a feeling of relaxation tomothers in labor. In line with research conducted by Indri et al, it shows the effectiveness of giving oxytocin massage in reducing pain in the active phase of labor in the first stage and creating a feeling of comfort and relaxation.

Research conducted by Laily et al shows the influence and benefits of oxytocin massage for mothers in labor because it can reduce pain during labor. Research results show that oxytocin massage helps increase the release of oxytocin, control persistent pain, control feelings of stress, and reduce and relieve pain when the mother gives birth (Chakti et al., 2022). Giving oxytocin massage during labor can help increase the release of

oxytocin, which is a hormone that facilitates labor and controls persistent feelings of pain. Can relieve pain in mothers who are about to give birth and increase the relaxed condition of the body and create a sense of comfort for the mother (Putri et al., 2022).

Research conducted by Merry et al at the Garuda Community Health Center included 15 respondents who were given massage and 15 respondents who were not given massage. This study showed that labor pain in the oxytocin massage group experienced a decrease as evidenced by the decrease in the number of respondents in the moderate pain category from 57.1% during the pre-test and to 36.7% during the post-test and it can be concluded that giving oxytocin massage can reduce pain (Wijaya et al., 2018).

Providing oxytocin massage to the birthing mother creates a feeling of comfortfor the mother in facing childbirth. The massage given provides benefits to the mother in improving blood circulation and can stretch the muscles so that the pain felt during the birth process is also reduced, and giving oxytocin massage to the mother during labor can minimize the side effects that arise and at a lower cost. affordable.

2. Level of Pain Reduction Before and After Endorphin Massage and Oxytocin Massage

Massage therapy is a technique to reduce the pain felt during the first stage of labor, where it is quite important to give massage to pregnant women and mothers giving birth during the time leading up to and during the birth process (Meihartati & Mariana, 2018). Giving endorphin massage can stimulate the body to release endorphin substances or compounds which can relieve pain and soreness and create a feeling of comfort during the birthing process (Tanjung & Antoni, 2019a). The results of research conducted by Wiwi et al show that there is a decrease in the pain scale in mothers giving birth. It was found that the intensity of pain in the first stage of the active phase in mothers giving birth before the endorphin massage was carried out wasan average of 6.38 and then after the endorphin massage was carried out there was a decrease in the intensity of pain in mothers giving birth with an average of 5.19 (Maesaroh et al., 2020).

The results carried out by Kurnia et al in 2017 provided an endorphin massage intervention, there were 8% of pregnant women who experienced mild pain, 58% of them had moderate pain, 35% of them had severe pain and after the intervention the results of pregnant women experiencing mild pain were 23%. , moderate pain was 69%, and severe pain was 8%. This research shows that there is a significant effect of providing endorphin massage intervention on reducing pain levels in pregnant women (Diana, 2019b). The results of research conducted by Handayany et al in 2020 showed that before the endorphin massage was carried out, almost 45% of 20 pregnant women experienced severe pain in the back area and after the endorphin massage was carried out, none of the pregnant women experienced severe pain (Martilova et al., 2021).

Research conducted by Khasanah and Sulistyawati in 2020, gave endorphin massage to 18 people (75%) who experienced very severe pain. And after being given endorphin massage, 17 people (70.83%) experienced a change in moderate pain, it was said that endorphin massage had an effect on the body. This research shows that endorphin massage has a significant effect on reducing pain in pregnant women during

the first active phase (Agustus, 2023).

Non-pharmacological methods are widely used in the birthing process to reduce pain, apart from being affordable they are also very easy to do. Oxytocin massage is a series of movements that can reduce pain during the birth process and can also create a feeling of comfort. This is due to the pain that occurs due to short contractions during the birth process which causes more severe pain and the oxygen supply has not yet been restored to the uterine muscles. One of the causes of pain during the birth process is reduced oxygen supply to the uterine muscles.

Research conducted by Merry et al in 2018 showed that the results of giving massage to the experimental group with moderate pain had a value of 57.1% during the pretest and decreased to 36.7% during the posttest, and the experimental group with severe pain had a value of 14.3% during the pretest and decreased to 0% during the posttest. This shows that giving oxytocin massage has an effect on reducing the level of labor pain (Chakti et al., 2022).

Research conducted by Aryani states that giving frequent massages when the mother is about to give birth can suppress the production of pain mediators, when the pain decreases the mother can feel calm and adapt to the conditions of labor so that the labor process can go well. The research results show that there is a significant reduction in pain after oxytocin massage, and this massage can also be an option because it has no side effects for the mother and fetus (Dewi et al., 2022).

3. The Effect of Endorphin Massage and Oxytocin Massage on Reducing Pain Intensity in Maternity Women

Pregnancy is a physiological thing experienced by a woman. The changes experienced in each trimester of pregnancy, whether they occur in the first trimester, second trimester and third trimester, will certainly cause various kinds of discomfort that will be felt by every pregnant woman, for example pain. The mother can feel pain starting from the third trimester, before delivery and even during the birth process (Diana, 2019a). There are various ways to treat pain in mothers giving birth, one of which is non-pharmacological methods or without drugs Rosmiarti *et al*, 2020). Massage therapy can be given to the mother before the deliveryprocess until after giving birth as a form of reducing the pain felt by the mother (Diana, 2019a).

Research conducted by Kurnia et al found that before intervention was given, 8% of pregnant women experienced mild pain, 58% moderate pain, and 35% severe pain, and after being given intervention in the form of massage, 23% of mothers experienced mild pain and 69% moderate pain. 0% and severe pain 8%. These results show that there is a significant effect of massage intervention on reducing pain in pregnant women (Sarofah et al., 2023).

Endorphin massage is an effort to reduce pain in the form of non-pharmacological therapy. Constance Palinsky created endorphin massage as a way to reduce or relieve aches and pains in mothers who are about to give birth. Research conducted by Wulan in 2019 with 20 respondents found that the majority of mothers experienced moderate back pain at 60% and mild pain at 15% and after being given

endorphin massage therapy itwas found that the pain experienced by respondents became mild pain at 70% (Diana, 2019a).

Research conducted by Siti et al in 2023 in Surabaya with 34 respondents and the results obtained were that before being given endorphin massage, the majority experienced severe pain, 21 people (61.8%). And after being given endorphin massage, 17 people (50%) showed mild pain. According to researchers, there is an influence of endorphin massage on reducing the intensity of labor pain in the first stage of the active phase of primigravida in the Geger Health Center Work (Brillianty & Pulungan, 2021).

Research conducted by Sartika with a total of 20 respondents with the results obtained was that the average pretest pain intensity in the experiment, the minimum pain scale was 5, the maximum was 10, in the posttest the minimum pain scale was 4 and the maximum was 9. The results of this research show the value Pvalue = 0.003, so there is a difference in the results of pain intensity before and after endorphin massage treatment for mothers giving birth at BPM Sagita Darma Sari Palembang (Sartika et al., 2023).

And it was concluded that the endorphin massage method had a great influenceon reducing the intensity of pain in mothers giving birth during the first active phase. By giving massage to the mother during the birth process, the mother will feel calmer, more comfortable and relaxed, and a close relationship will be established between the health workers who serve her so that without realizing it, the intensity of the pain felt by the mother can be reduced, and the birth process can run smoothly (Wulandari & Mulyati, 2022).

Oxytocin massage is a massage that can have a relaxing effect and stimulate the brain to reduce adrenal hormone levels and increase the production of the hormone oxytocin, where oxytocin is a factor that can trigger adequate uterine contractions. Providing oxytocin massage is said to help reduce pain during childbirth. Research conducted by Merry et al in 2018 with 45 respondents found that there were differences in pain levels before and after giving oxytocin massage or it could be said that there was an effect of giving oxytocin massage on reducing the intensity of pain in mothers giving birth (Merry *et al*, 2018). Pain during the labor process itself is caused by short contractions during labor which cause pain and the oxygen supply to the uterine muscles has not fully recovered or in other words the oxygen supply to the uterine muscles is reduced (Wulandari & Mulyati, 2022).

According to Saleha, the intervention given to the first group, namely the intervention group, before the intervention was given, had the highest level of pain in mild pain, 10 people (50%) and after the intervention, mild pain increased to 70%. In the second group, namely the control group, 50% experienced mild and moderate pain, and after several hours the moderate pain was measured, it became 65%, and initially there was no severe pain, there was an increase of 15%, also because the pain before labor was getting longer. increases and the interval between pain decreases (Shahbazzadegan & Nikjou, 2022).

Apart from reducing pain, giving oxytocin massage can also speed up the labor process, where oxytocin massage can stimulate the release of the hormone oxytocin which causes uterine contractions to appear, thereby facilitating the labor process. Oxytocin

massage is a stimulation given to both sides of the spine to relax the intensity of tension caused by anxiety in mothers giving birth, thus increasing the release of the hormone oxytocin (Qonitun & Qiftiyah, 2021b).

CONCLUSION

Based on the discussion from this literature study, it can be concluded, regarding the influence of endorphin massage and oxytocin massage on pain intensity in maternity mothers, it was found that there was an effect of giving endorphin massage and oxytocin massage to mothers giving birth on pain intensity, which can reduce and relieve the pain felt by mothers during the birth process, there was a difference in the level of pain felt by women giving birth, which decreased between before giving endorphin massage and oxytocin massage and after giving endorphin massage and oxytocin massage, and that giving endorphin massage and oxytocin massage had an effect that reduced the pain felt by the mother during the birth process, had a relaxing effect, created a feeling of comfort and calm so that the birth process could run smoothly. Health workers, especially midwives, are expected to provide midwifery care, especially to mothers giving birth, by providing complementary therapy in the form of oxytocin massage or endorphin massage as an effort to reduce labor pain.

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