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# Paper

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## THE EFFECT OF ENDORPHIN MASSAGE TO DECREASE BACK PAIN IN THRID TERM OF PREGNANCY MOTHER IN DR. RAMELAN HOSPITAL SURABAYA.

#### DYA SUSTRAMI & MERINA WIDYASTUTI STIKES HANG TUAH SURABAYA

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#### **ABSTRACT**

Back pain is a very common symptom that raises morbidilitas quite heavy. Some of the interventions that can be done to relieve back pain experienced by pregnant women by means of pregnancy exercise, relaxation and massage. 3 dorphins Massage is a massage technique and a touch of light to be able to normalize the heart rate and blood pressure, and increasing the relaxed conditions. This study aims to analyze the endorphin massage to decrease lower back pain in the third term pregnant mother.

The method used in this research was the method pre-experimental. The population in this study were all pregnant women routinely check in January - May 2016. Samples was 20 third term pregnant women who met the inclusion criteria. The technique sampling used was purposive sampling. The independent variables was the effect of endorphin massage within one week 3 times for 30 minutes. The dependent variable was the reduction of back by using a pain scale (NRS). Collected data statistically tested using the Wilcoxon by SPSS 16.

In research showed back pain before endorphin massage majority indicated of moderate pain were 16 respondents (80%), after endorphin massage majority showed that the majority mild pain were 13 respondents (65%). Statistical test results obtained with the wilcoxon test the value  $\rho$  = 0.001. It showed that  $\rho$  <0.05 means there endorphin effect of massage to decrease back pain in pregnant women in the third term in Ramelan Surabaya hospital

Results in this study showed that endorphin massage be able to be an alternative choice in interventions to lower back pain in pregnant women thrid term

#### KEYWORDS: Endorphin massage, Lower back pain, Third trerm pregnant women

#### **Background**

Back pain is a common problem that often occurs in pregnant women. Back pain is the pain felt in the area of the vertebrae, especially arising excessive stretching or fatigue as well as bending, lifting or running excessively. Pain may be mild to severe to interfere with the activity of pregnant women (Ummah, 2012). Some of the interventions that can be done to relieve back pain experienced by pregnant women by means of pregnancy exercise, yoga, acupuncture, relaxation and massage (massage). Endorphins Massage is a massage technique and a guch of light to be able to normalize the heart rate and blood pressure, and increasing the relaxed conditions in the pregnant woman's body by triggering a feeling of comfort through the skin surface (Kuswandi, 2011). But until now there has been no research done relaxa 2) n endorphin related to the reduction of back pain in the third trimester pregnant women.

Pregnant women experience changes in the womb that weight gain and enlargement of the uterus that occur due to a combination of hypertrophy or increase in cell size and influence of mechanical pressure against the interior wall of the uterus as the development of the fetus in the womb. In line with the gradual weight gain during pregnancy and

increasingly growing size of the uterus causes the posture and gait of women have changed noticeably. If a pregnant woman does not give full attention to her posture, then he will walk with the body swing backward due to increased lordosis. This arch will then stretch the back muscles and cause pain (Varney, 2006).

Endorphine massage can increase the release of oxytocin substance that can stimulate pain reduction. Endorphins are neurotransmitters that inhibit the delivery of pain stimuli so as to decrease the sensation of pain. Giving and orphin massage at third trimester pregnant women are expected to be able to control the pain and persistent pain, controlling the stress and boost the immune system (Kuswandi, 2011). Thus, researchers interested in studying the effects of andorphin massage to decrease lower back pain in pregnant women in the third trimester Rumkital Dr. Ramelan Surabaya.

#### **Research Method**

The research design was preexperimental approach to engineering one group pretest-posttest. The studv population was all pregnant women in the third trimester that check Rumkital Dr. Ramelan Surabaya from January to May 2016 a number of 51 people. Samples of this study was partially third trimester pregnant women of 20 people who met the inclusion criteria were respondents willing to sign informed consent which has been prepared by the researchers, pregnant women who check routine third trimester of pregnancy, back pain and accompanied by suaminya. Sedangkan criteria exclusion is the mother who resigned as a research subject or disease complications. The technique used in this study is the Probability sampling with simple random sampling technique.

The independent variable in this study was the effect of endorphin massage. While priable (dependent) is the reduction of back pain in the third trimester pregnant women. Instrument pengumplan data using observation sheet with the pain scale. Data were analyzed using the Wilcoxon sign test with a significance level of 0.05.

#### Result of Research General data

Characteristics of respondents

	acteristics of resp		
No	11 Age	(f)	(%)
1	Less 25 year's old	9	45
2	25-35 year's old	8	40
3	36-45 year's old	2	10
4	46-55 year's old	1	5
	Total	20	100
No	age pregnancy	Ŋ	(%)
1	29-32 week	13	65
2	33-36 week	4	20
3	37-40 week	3	15
	Total	20	100
No	education	.f)	(%)
1	Tidak sekolah	1	5
9	SD	4	20
3	SMP	2	10
	SMA	10	50
4 5	Perguruan Tinggi	3	15
	Total	20	100
No	Job	f	%
1	Swasta	2	10
2	PNS	0	0
3	Wiraswasta	6	30
4	IRT	12	60
	Total	20	100
No	spacing pregnancies	f	%
1	first p <sub>102</sub> nancy	8	40
2	Less I year	2	10
3	1-3 year	4	20
4	4-6 year	4	20
5	more 6 year	2	10
	Total	20	100
No	Experience	f	%
1	1-3	15	75
2	4-6	5	25
	Total	20	100
		20	%
No	Pain scale before	f	%
. 10	endorphin	,	
1	massage	1	20
1	mild pain	4	20
2	moderate pain	16	80
3	severe pain	0	0
	Total	20	100
No	Pain scale after	f	%
	endorphin massage		
1	mild pain	13	65
2	moderate pain	7	35
3	severe pain	0	0
	Total	20	100

#### Discussion

## 1. Analysis of the incidence of lower back pain before endorphin massage

The results showed that out of 20 respondents most respondents had experienced back pain is the pain the majority were 16 respondents (80%), 4 respondents (20%) had mild pain, and no

respondent (0%) who had experienced severe rain

In the third trimester of pregnancy can be said of pregnant women carry the burden of excess weight seiringpeningkatan fetus in the womb. The muscles of the body are also experiencing the relaxation so it is easy to feel lelah. Hal is what makes the position of pregnant women in any activity so it feels completely wrong. According to Rahim (2012), back pain is a common complaint in the community. This complaint is estimated spout 65% of the entire population. Back pain is one of the most discomfort is common during pregnancy. Back pain can occur due to stress on the back muscles or shift in the spine, causing the joints depressed (Fraser, 2009). Back pain during pregnancy is a relatively common problem. The growing fetus can cause postural problems, and nearing the end of pregnancy, the baby can press on nerves and cause pain. The hormones produced during pregnancy can also affect the spine (Bull, 2007). This is evidenced the results of a cross tabulation level lower back pain before endorphin massage that of the 20 respondents who experienced pain were 16 respondents (80%), mild pain four respondents (20%). Researchers found lower back pain experienced by third trimester pregnant women is something physiologically as a result of weight gain and enlargement of the uterus that occur due to a combination of hypertrophy or increase in cell size and influence of mechanical pressure against the interior wall of the uterus as the development of the fetus in the womb

## 2. Analysis of the incidence of lower back pain after doing endorphin massage

The results showed that the majority of third trimester pregnant women who experience mild pain as much as 13 respondents (65%) with mild pain scale and the seven respondents (35%) had moderate pain. Efforts to be made by health workers for the prevention or treatment of back pain in pregnant women one of them by way of massage that aims to restore the tension on the muscle so

that it can be used to further enhance relaxation and reduce pain in trimester 3 (Richayati and ratih, 2013). According to Simkin, et al (2005) massage (massage) can soothe and relax the tensions that arise during pregnancy and childbirth. Massage on the neck, shoulders, back, legs, and hands can make nyaman.Pijat (massage) how to gently help the mother feel refreshed, relaxed, and comfortable. A study says, mothers in massage (massage) 20 minutes will be free of pain. It happened because the massage (massage) stimulates the body to release endorphins compound which is a pain reliever alami. Endorphin can also create a feeling of comfort and tasty. Massage (massage) also make mothers feel closer to those who nurse (Danuatmadja and Mila, 2008).

## 3. Analysis of the effect of back pain before and after the massage endorphin

Statistical test results using Wilcoxon rank test test values obtained p = 0,001 which means p <0.05 so that it can be 3 ncluded that H1 is accepted it means there is a significant effect of endorphin massage therapy to decrease lower back pain in pregnant women in the third trimester Rumkital Dr. Ramelan Surabaya.

The results showed that out of 20 respondents as many as 16 respondents (80%) had moderate pain and 4 respondents (20%) mild pain before endorphin massage. The theory according Lichayati and Ruth (2013), back pain predisposing factors include growth in uterus that cause changes in posture, weight gain, the effect of hormone relaxin on ligaments, previous history of back pain, parity and activities. McEvog et al. (2001) on Eileen (2007) found that back pain earlier in pregnancy are predictors of back pain in subsequent pregnancies. In addition, factors parity and activities that occur in women grande multipara who had not exercised any time after giving birth tend to experience muscle weakness andomen. While primigravid women usually have a very good abdominal muscle because the muscle stretch have never experienced before. The severity of

lower back pain typically increase parity. Back pain can also be the result of excessive bending, running without a break, especially when the activity is performed when the woman is tired (Varney, 2006). It is based on research that the majority of respondents who experience lower back pain to work as a housewife. Based on the results of cross (pre) tabulations before endorphin massage can be argued that the majority of respondents prior to the massage endorphin 16 respondents (80%) had moderate pain, 4 respondents (20%) experienced mild pain. Researchers assume when housewives do household chores, although only at home but completed the grueling activities easier to experience lower back pain in the third trimester of pregnancy.

The results showed that the majority of third trimester pregnant women who experience mild pain as much as 13 respondents (65%) after three meetings endorphin massage for 30 minutes. Based on these data in accordance with the theory according Kuswandi (2011),endorphin massage is a therapeutic touch / light massage considerable importance is given to pregnant women, in the time leading up to the time of delivery. This is because massage stimulates the body to endorphins release compound yangmerupakan pain reliever and can create a feeling of comfort.

Endorphins are neurotransmitters that inhibit the delivery of pain stimuli so as to decrease the sensation of pain. Based on the above facts in accordance with the theory according to Brunner and Suddarth (2002, in Nur, 2011) endorphine massage can increase the release of oxytocin substance that can stimute pain reduction. Endorphins are one of the brain chemicals known as neurotransmitters that serves to transmit electrical signals in the nervous system. Analgesic receptor is produced in the spinal cord (spinal cord knot up to the coccyx) and rerve endings (Aprilia, 2010). Endorphins can be found dikelenjar pituitary. Stress and pain are the two most common factors that cause the release of endorphins. Endorphins interact with opiate receptors in the brain to reduce our perception of pain and act

similarly to drugs such as morphine and codeine. In contrast to opiate drugs, however, activation of opiate receptors by the body's endorphins does not lead to addiction or dependence (Stoppler, 2013 in Raudotul, 2014) .Berdasarkan cross tabulation results after (post) endorphin massage can be argued that the majority of respondents do endorphin massage after 13 respondents (65%) experienced mild pain, and 7 respondents (35%). Researchers found that massage can increase endorphin release oxytocin substance that cars stimulate pain reduction. In addition, Endorphins interact with opiate receptors in the brain to reduce our perception of pain and act similarly to drugs such as morphine and codeine. Therefore, the provision endorphins massage to be given to pregnant women during the third trimester are still experiencing lower back pain to relieve lower back pain due to changes in body shape eg belly getting bigger. Based on this it was found that endorphin massage has a significant influence on the reduction in lower back pain in pregnant women in the third trimester Rumkital Dr. Ramelan Surabaya.

#### Limitation

Limitations of the weaknesses and barriers in research. In this study, some of the limitations faced by researchers are:

- 1. Data was taken with her husband respondents and do in gyms so that they are embarrassed to perform optimally therapy.
- 2. In this study, the control group was not done due to the limited number of samples

#### Conclusion

Most of the third trimester pregnant women experiencing moderat pain before massage endorphin. The majority of third trimester pregnant women decreased back pain. There is the influence of endorphins massage therapy with back pain in pregnant women in the third trimester Rumkital Dr. Ramelan Surabaya.

#### Recomendation

It is expected that the second trimester pregnant women who experience

lower back pain can do at home with her husband massage endorphins that can reduce pain.

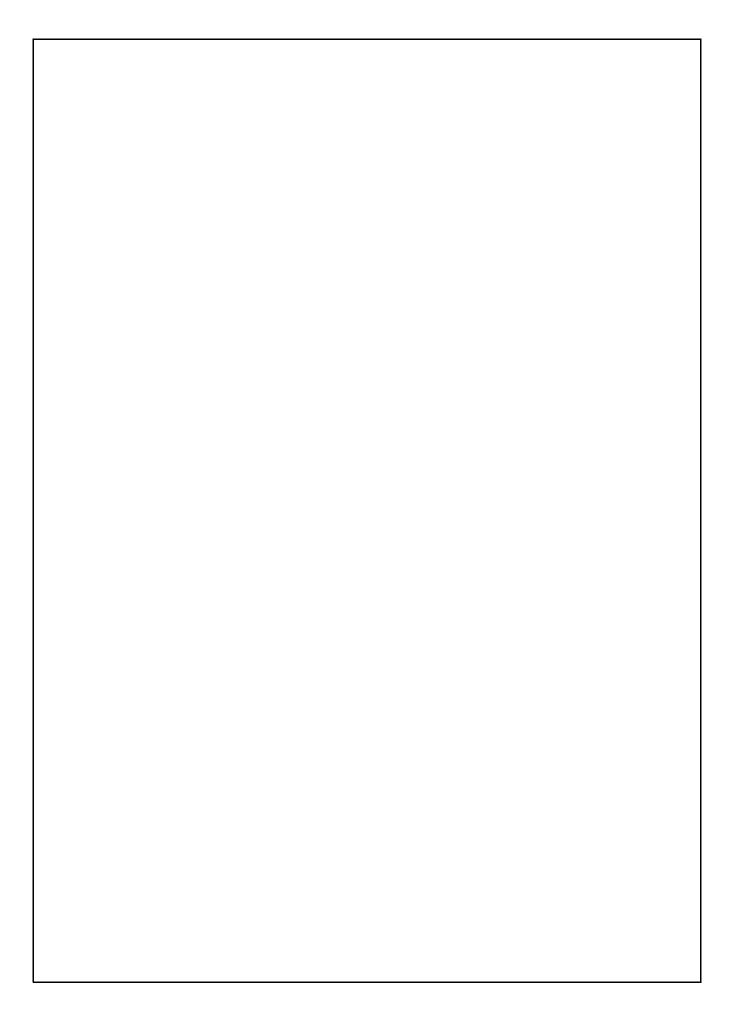
Hopefully this research can be used as a consideration in providing pregnancy counseling in the use of selection methods endorphin massage for pregnant women who experience lower back pain.

We hope this research can be used as a reference for further research by design, instruments, and more variables respresentif.

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