



DECREASED ANXIETY OF PREGNANT WOMEN WITH ENDORPHINE MASSAGE ON THE PREOPERATION OF SECTIO CAESAREA

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ABSTRACT

Maternal anxiety facing sectio caesarea that is not treated properly can cause physical and psychological changes that can eventually increase the work of sympathetic nerves and there will be an increase in heart rate, breath frequency, blood pressure, and in general reduce energy levels in patients to the detriment of patients. The purpose of this study was to determine the effectiveness of endorphine massage against sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital. The research design is a Quasi-Experiment using experimental groups and control groups. The population is 193 people. The samples used for each group were 18 people with a purposive sampling technique. Data collection was carried out using the Hospital Anxiety Depression Scale questionnaire. Data analysis used bivariate analysis in the form of the Wilcoxon test and the Mann Whitney test. The results of the study found that anxiety before the endorphine massage intervention was mostly moderate 14 people (77.8%) and after the intervention more than half were mild 12 people (66.7%). Before the deep breath relaxation intervention was mostly moderate 16 people (88.9%) and after the intervention more than half were moderate 13 people (72.2%). There is an effect of endorphine massage on anxiety (p-value 0.000 < 0.05). There is an effect of deep breath relaxation on anxiety (p-value 0.004 < 0.05). There is a difference in anxiety between the intervention of endorphine massage with deep breath relaxation and endorphine massage is more effective than deep breath relaxation (p-value 0.003 < 0.05). Endorphine massage intervention can overcome anxiety problems because it can stimulate endorphine hormones which can provide a comfort effect. The conclusion was found that endorphine massage can reduce anxiety. Advice for hospitals can make endorphine massage a standard operating procedure in dealing with anxiety problems of preoperative patients.

Keywords: anxiety; deep breath relaxation; endorphin massage

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INTRODUCTION

Childbirth with Sectio caesarea is an operative procedure, the process of the stages of surgery or Perioperative is a combination of three phases of surgical experience namely Pre operative, Intra operative (action) and Post operative. The Pre-operative Stage is the first stage in Perioperative care that begins from the moment the patient is admitted to the patient's receiving room and ends when the patient is transferred to the operating table for surgical procedures. The scope of pre-operative includes the assessment of patient data, pre-operative interviews and preparing the patient for anesthesia. Therefore, the role of the nurse in this condition is to clarify in the form of asking about the complaints experienced and further dealing with the problems faced by the patient at the time of preoperation. (Maryunani, 2016).

Sectio caesarea preoperative preparation consists of Physical preparation and Psychic preparation. Physical preparation includes general physical health status, nutritional status, fluid and electrolyte balance, gastric and colon hygiene, shearing the operating area, personal hygiene, bladder emptying. Psychic or mental preparation is no less important in the preparation for surgery, because the patient's unprepared or labile mentality has an effect on his physical condition (Long, 2015).

Psychologically, the physical changes due to pregnancy and the action of Sectio caesarea can affect the mother's mentality. Mentally the mother must be prepared for surgery, because there is always a sense of anxiety, fear of injections, wound pain, anesthesia, even against possible defects or death. On the basis of understanding, patients and families can give approval and permission for surgery (Sjamsuhidayat and Jong 2016). The anxiety faced by the mother is an adaptive response to stress because surgery will be performed. Anxiety usually arises at the pre-operative stage when the patient anticipates surgery. So that before undergoing surgery the patient is advised to prepare well. In sectio caesarea anxiety that arises in the preoperative phase because the impacts that will be caused are different due to differences in parity (Baradero, 2015). Based on differences in parity, considering the experience of pervaginam childbirth and action, there will be differences in anxiety experienced in primipara mothers and multipara mothers (Long, 2015). It can be said that mothers with multiple because they already have experience in childbirth so that their anxiety will be different from that of primipara mothers because they have no experience.

The response to anxiety and patient complaints is that usually the patient becomes a bit restless and afraid which sometimes does not seem obvious, the patient often asks constantly and repeatedly even though the question has been answered, sometimes the patient does not want to talk and pay attention to the surrounding situation but tries to divert it to something else, or the patient moves continuously and cannot sleep (Maryunani, 2016). Anxiety that is not handled properly can cause physical and psychological changes that can eventually increase the work of sympathetic nerves and there will be an increase in heart rate, breath frequency, blood pressure, cold sweats, feeling heartburn, camping disorders and in general reducing energy levels in patients to the detriment of the patient himself (Savitri, et al, 2016). The anxiety that primigravida will experience is an excessive fear of the actions to be carried out (Long, 2015).

Anxiety can be overcome with several treatments including music therapy, endorphine massage to relax tense muscles and relaxation techniques (Maryunani, 2016). Music therapy is the provision of intervention by presenting musical instruments, treatment with music therapy can have a relaxing effect on mothers who experience anxiety. Relaxation techniques in the form of deep breath are one of the techniques that can focus the mother and reduce the problems faced. While the endorphine massage technique provides a sense of comfort due to the release of endorphine hormones that can provide calm (Maryunani, 2016).

Endorphine massage is one of the better techniques applied in overcoming anxiety because the technique has the advantage of a technique that does not require tools, can be done by health workers and families which is directly seen as a form of support for the problems faced by mothers. Endorphine massage is a touching technique and this mild massage is very important for pregnant women to help provide a sense of calm and comfort, both before and during the delivery process. (Kuswandi, 2016). Endorphine massage performed on preoperative mother sectio caesarea can reduce the level of anxiety, this is mechanismally by doing massage therapy that can stimulate the body to release endorphine hormone compounds

which are natural pain relievers and cause a feeling of comfort that eventually decreases anxiety (Kuswandi, 2016).

Based on data in the central surgical room of the Bandung City Hospital, data was obtained that sectio caesarea actions in 2019 were 1153 people and in 2020 as many as 1269 people. The above results indicate an increase in SC cases. Interviews with 10 primigravida mothers who wanted to be conducted sectio caesarea, found that all of them said they were afraid because they were worried that there would be some reason at the time of sectio caesarea. Nine of them said they felt dizzy like they wanted to vomit and also the heart felt very fast. One person said they didn't feel dizziness but the heart felt palpitations.

As a result of the observations of the 10 people, 9 people seemed to be restless, unable to lie down calmly, and their breathing seemed to be stagnant and there was an increase in pulse rate. One person appeared to lie quietly but always asked health workers about sectio caesarea surgery. The results of the interview with the nurse in the room said that in overcoming the anxiety problems faced by patients, they usually teach and advise patients to relax their deep breath but there has been no evaluation of the results of the deep breath relaxation and also until now there has never been an intervention in the form of endorphine massage in overcoming the problem of preoperative anxiety. The purpose of the study was to determine the effectiveness of endorphine massage against Sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital

METHOD

The research design used in this study is a Quasi-Experiment, a study that seeks to reveal causal relationships by involving treatment groups and control groups by not using randomized techniques. In this design, it is divided into two groups, the first group is the treatment group given the experimental intervention and the second group is the control group. The treatment group in this study was the group with the treatment of giving endorphine massage to the control group in this study, namely the group with the therapy that is usually carried out in hospitals, namely deep breath relaxation. The implementation of the study is that the two groups will be given a pretest to measure anxiety before the intervention is given, and after the intervention is given a posttest to re-measure anxiety.

The population is the whole subject of the study. The population in this study was patients who were treated in the Central Surgery room of Bandung city hospital from January to July 2021, which was 193 people. The number of samples taken in this study was 36 divided into two groups, namely the experimental group of 18 people and the control group of 18 people. The sampling technique is in the form of purposive sampling, which is a method of taking based on criteria that have been determined by the researcher.

RESULTS

Sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital before the deep breath relaxation intervention was mostly with moderate anxiety as many as 16 people (88.9%) and after the intervention deep breath relaxation more than half with moderate anxiety as many as 13 people (72.2%).

Table 1
Anxiety intervention group

Anxiety	Before <i>Endorphine Massage</i>		After <i>Endorphine Massage</i>	
	f	%	f	%
Mild	2	11,1	12	66,7
Moderate	14	77,8	6	33,3
Severe	2	11,1	0	0

Sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital before the endorphine massage intervention was mostly with moderate anxiety as many as 14 people (77.8%) and after the intervention endorphine massage more than half with mild anxiety as many as 12 people (66.7%).

Table. 2
Anxiety control group

Anxiety	Before deep breathing		After deep breathing	
	f	%	f	%
Mild	1	5,6	5	27,8
Moderate	16	88,9	13	72,2
Severe	1	5,6	0	0

The effect of endorphine massage intervention on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital obtained results that the p-value of $0.000 < 0.05$ means that there is an influence of endorphine massage on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital

Table 3
Decreased anxiety intervention group

Anxiety after <i>Endorphine Massage</i>	Anxiety before <i>Endorphine Massage</i>						Total		p-value
	Mild		Moderate		Severe		f	%	
	f	%	f	%	f	%			
Mild	2	11,1	9	50	1	5,6	12	66,7	0,000
Moderate	0	0	5	27,8	1	5,6	6	33,3	
Severe	0	0	0	0	0	0	0	0	

The effect of deep breath relaxation intervention on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital obtained results that the p-value of $0.004 < 0.05$ means that there is an effect of deep breath relaxation on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital.

The effect of endorphine massage with deep breath relaxation on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital found that the p-value of $0.003 < 0.05$ means that there is a significant difference in anxiety between endorphine massage interventions and deep breath relaxation and endorphine massage interventions are more effective than deep breath relaxation interventions.

Table 4.
Decreased anxiety control group

Anxiety after deep breathing	Anxiety before deep breathing						Total		p-value
	Mild		Moderate		Severe		f	%	
	f	%	f	%	f	%			
Mild	1	5,6	4	22,2	0	0	5	27,8	0,004
Moderate	0	0	12	66,7	1	5,6	13	72,2	

Table 5
Differences in anxiety decline

Intervensi	anxiety						Total		p-value
	Mild		Moderate		severe		f	%	
	f	%	f	%	f	%			
<i>Endorphine Massage</i>	12	66,7	6	33,3	0	0	18	100	0,003
Deep breathing	5	27,8	13	72,2	0	0	18	100	

DISCUSSION

Based on table 1, it is known that sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital before the endorphine massage intervention was mostly with moderate anxiety as many as 14 people (77.8%) and after endorphine massage intervention more than half with mild anxiety as many as 12 people (66.7%). Sectio caesarea is giving birth to a fetus through an incision of the abdominal wall (abdomen) and the uterine wall (uterus) (Jitowiyono & Kristiyanasari, 2016). Usually, patients who are in the preparation room for surgery will multiply their anxiety. Anxiety is an unpleasant and unjustified feeling of fear that is often accompanied by physiological symptoms (Tomb, 2016).

Endorphine massage is a mild touch and massage technique that can normalize heart rate and blood pressure, as well as improve the relaxed condition in the body of pregnant women by triggering a feeling of comfort through the surface of the skin. This technique can increase the release of the hormone endorphine, a hormone that facilitates childbirth., the technique of endorphine massage can help strengthen the bond between pregnant women and husbands in preparing for childbirth. (Kuswandi, 2016). Based on the theory above, it can be said that when facing childbirth with Sectio caesarea the mother will experience anxiety, so treatment such as endorphine massage is needed. Endorphine massage intervention can reduce anxiety, this is according to the results of the study, which was obtained mostly with moderate anxiety as many as 14 people (77.8%) and after endorphine massage intervention more than half with mild anxiety as many as 12 people (66.7%).

The results of the study in accordance with the research conducted by Maesaroh (2019) regarding the effect of endorphine massage on the anxiety level of multipara maternity mothers kala I obtained results that the administration of endorphine massage affects the level of anxiety of multipara maternity mothers kala I. The anxiety experienced by mothers according to researchers is because the mother studied is primigravida mother and was first performed sectio caesarea so that she has no experience so it is certain that the mother will experience anxiety. More of the questions with the highest score after the intervention were number 7 regarding feelings of panic (very unsettled). This is natural because the mother is faced with sectio caesarea actions that have never been experienced before so that the mother

feels panicked. Furthermore, the lowest score was obtained, namely number 4 regarding sitting comfortably, this is because from the results of observations after the endorphine massage intervention, the position of the mother felt comfortable with the position of sitting on the bed while waiting to enter the operating room.

Based on table 2, it is known that sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital before the deep breath relaxation intervention was mostly with moderate anxiety as many as 16 people (88.9%) and after the deep breath relaxation intervention more than half with moderate anxiety as many as 13 people (72.2%). Sectio caesarea is a surgical process to give birth to a fetus through slices on the abdominal wall and uterine wall (Andayasari, Muljati, Sihombing, Arlinda, & Opitasari, 2016). Stuart (2016) says anxiety is an emotional state that does not have a specific object and this condition is experienced subjectively. Anxiety is different from fear.

Deep breath relaxation techniques are self-sustaining nursing interventions to lower anxious levels, improve pulmonary ventilation and improve blood oxygenation, these techniques are easy to learn and contribute to lowering or relieving pain by reducing muscle pressure and anxiety (Black, 2018). Based on the theory above, it can be said that deep breath relaxation can reduce anxiety, this is in accordance with the results of studies that show that anxiety before the deep breath relaxation intervention is mostly with moderate anxiety as many as 16 people (88.9%) and after the deep breath relaxation intervention more than half with moderate anxiety as many as 13 people (72.2%).

The results of the study in accordance with Rokawie's (2018) research on the effect of deep breath relaxation in reducing anxiety in preoperative patients found that deep breath relaxation can reduce anxiety. The anxiety experienced by the mother in facing the process of delivery sectio caesarea in the absence of a previous history of sectio caesarea makes the mother experience anxiety due to the mother's ignorance of what will be faced next. The anxiety that occurs can be seen from the mother's breath that is jolted, and after the intervention of deep breath relaxation, the breath becomes regular and after an assessment of the anxiety, it turns out that the mother's anxiety is reduced.

Judging from the questions, the question with the highest score was obtained, namely number 3 regarding the fear that flashed through the respondent's mind. This is very natural because the fear arises because the mother has never had sectio caesarea surgery. The question with the lowest score is number 6 regarding the anxiety of having to undergo busy surgery. This is because after relaxation of the deep breath, the mother seems to be sitting quietly and knows that anesthesia will be carried out so that the mother will not feel pain during the operation.

Based on table 3 regarding the effect of endorphine massage intervention on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital, it was found that the p-value of $0.000 < 0.05$ means that there is an influence of endorphine massage on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital.

The benefits of endorphine massage before delivery are to reduce panic, stress and anxiety in the face of childbirth, can be used to reduce discomfort during the labor process and increase relaxation by triggering a feeling of comfort through the surface of the skin, Normalize heart rate and blood pressure and contribute as the euphoria that mothers feel after childbirth and endorphine massage can trigger endorphine and oxytocin hormones (Pro V Clinic Team, 2018). Based on the theory above, it can be said that endorphine massage can reduce anxiety by triggering the hormones endorphine and oxytocin. This is in accordance with the results of

studies that show that there is an influence of the influence of endorphine massage on the anxiety of sectio caesarea preoperation.

The results of the study in accordance with the research conducted by Putri (2017) regarding the effect of endorphine massage on the anxiety level of primigravida mothers at >36 weeks of gestation in facing childbirth in the work area of the Cibereum health center in Tasikmalaya City, it was found that there was an effect of giving endorphine massage on reducing anxiety levels. Endorphine massage is one of the better techniques applied in overcoming anxiety because the technique has the advantage of a technique that does not require tools, can be done by health workers and families which is directly seen as a form of support for the problems faced by mothers. Endorphine massage helps provide a sense of calm and comfort, both before and during the delivery process will take place. Endorphine massage can provide a calming effect that reduces the level of anxiety. This is in accordance with the results of the cross table found that maternal anxiety after the intervention was more than half of respondents with mild anxiety (66.7%) who before the intervention with moderate anxiety. So that hospitals can make endorphine massage interventions as one of the interventions that can reduce the anxiety of preoperative sectio caesarea mothers.

Based on table 4 regarding the effect of deep breath relaxation intervention on sectio caesarea preoperative anxiety on primigravida mothers in the Central Surgery Room of Bandung City Hospital, it was found that the p-value of $0.004 < 0.05$ means that there is an influence of deep breath relaxation on sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital. Deep breath relaxation techniques can provide various benefits, the effects of deep breath relaxation include a decrease in the pulse, a decrease in muscle tension, a decrease in metabolic speed, an increase in global consciousness, a feeling of peace and well-being and a relaxed period of alertness (Potter and Perry, 2016). Based on this theory, it can be said that deep breath relaxation can reduce the level of anxiety. This is in accordance with the results of studies that show there is an effect of deep breath relaxation on sectio caesarea preoperative anxiety.

The results of the study in accordance with the research conducted by Triyadi (2015) regarding the effect of deep breathing on preoperative anxiety of patients at RSUD 45 Kuningan found that there was an influence of deep breathing on preoperative distress (p value $0.000 < 0.05$). Physiologically, there is a decrease in the level of anxiety during deep breath relaxation due to a decrease in pulse and a decrease in muscle tension during deep breath relaxation, so that with the more relaxed the mother when deep breath relaxation is carried out, the anxiety is also reduced. Relaxation of deep breath can provide a calming effect that reduces the level of anxiety. This is in accordance with the results of the cross table found that maternal anxiety after deep breath relaxation interventions whose origin was severe became mild (72.2%) and those whose origin was moderate anxiety became mild anxiety (27.8%). The decrease in anxiety in patients due to deep breath relaxation measures has become a Standard Operating Procedure in hospitals in overcoming anxiety.

Based on table 5 regarding the difference between endorphine massage and deep breath relaxation against sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital, it was found that the p-value of $0.003 < 0.05$ means that there is a significant difference in anxiety between endorphine massage intervention and deep breath relaxation and endorphine massage intervention is more effective than deep breath relaxation intervention.

Based on the results of the study showed that there is a significant difference in anxiety between the intervention of endorphine massage and the relaxation of deep breath. Both interventions showed results that there was a decrease in anxiety levels after the intervention. However, based on the calculation results, it was found that endorphine massage interventions were more effective than deep breath relaxation interventions. These results are in accordance with research conducted by Arianti (2019) regarding the effect of endorphine massage on the level of anxiety of primigravida mothers when 1 in the work area of the Dadok Tunggul Hitam Health Center in Padang City, it was found that there was a significant change in the level of anxiety in the experimental group before and after being given endorphine massage. Endorphine massage performed on preoperative mother sectio caesaera can reduce the level of anxiety, this is physiologically with massage therapy that can stimulate the body to release endorphine hormone compounds which are natural pain relievers and cause a feeling of comfort that eventually decreases anxiety.

The difference in anxiety reduction according to researchers is due to the relaxation mechanism of breath in the changes that occur, namely by reducing muscle tension by regulating breathing to normal so that it can provide a relaxing and calming effect which eventually the anxiety experienced by respondents is reduced. Whereas with endorphine massage in addition to reducing muscle tension, endorphine massage can also stimulate the body to secrete the hormones endorphin and oxytocin as hormones that soothe and provide a sense of comfort. The presence of this sense of comfort causes anxiety to decrease. The results showed that endorphine massage is better than deep breath relaxation, this is because when doing endorphine massage, The respondent's breathing also seemed to be regular as well as deep breath relaxation, so that endorphine massage could be better because in addition to the respondent's breathing could be more regular which caused relaxation to be added also by the presence of endorphine massage which stimulated the endorphine hormone so as to add calmness to the respondent who ended up being anxious was less than the respondent who only did deep breath relaxation. Therefore endorphine massage can be an operational procedure in addition to deep breath relaxation to overcome anxiety problems.

CONCLUSION

Researchers took conclusions from research on the effectiveness of endorphine massage against sectio caesarea preoperative anxiety in primigravida mothers in the Central Surgery Room of Bandung City Hospital, namely: Before the intervention endorphine massage was mostly with moderate anxiety and after endorphine massage intervention more than half with mild anxiety. Before the deep breath relaxation intervention is mostly with moderate anxiety and after the deep breath relaxation intervention more than half with moderate anxiety. There is an effect of endorphine massage on sectio caesarea preoperative anxiety in primigravida mothers ($p\text{-value } 0.000 < 0.05$). There is an effect of deep breath relaxation on sectio caesarea preoperative anxiety in primigravida mothers ($p\text{-value } 0.004 < 0.05$). There was a significant difference in anxiety between endorphine massage intervention and deep breath relaxation and endorphine massage intervention was more effective than deep breath relaxation intervention ($p\text{-value } 0.003 < 0.05$).

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