

# The Effectiveness of Positive Affirmations Combination of Face Acupressure and Aromatherapy Against Anxiety in Preoperative Sectio Cesarean Patients At Sentosa Hospital Bogor

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## ABSTRACT

Currently many mothers choose to give birth using the Caesarean section. The problem experienced by pre-SC mothers is anxiety about the condition of the mother and baby. Efforts that can be made to reduce anxiety in pre-SC mothers are by doing positive affirmations with a combination of full-blooded facial and aromatherapy such as lavender and chitrus aromatherapy. The purpose of this research is to find out the effectiveness of positive affirmations of a combination of face acupressure and aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor This type of research is a quasi-experimental design pretest and posttest two group design. The research was conducted at Sentosa Hospital, Bogor. Data collection will be carried out on June 15 – July 15, 2022. The population of this study is patients who gave birth by sectio caesarea electively in June – July totaling 46 people with the technique of sampling technique, namely total sampling. Data were analyzed by univariate and bivariate with Wilcoxon and Mann Whitney test. The data was processed using a computer with the SPSS program. Research result there is the effectiveness of positive affirmation of the combination of face acupressure and lavender and chitrus aromatherapy on the anxiety of preoperative cesarean section patients (p value 0.000). And there are difference in patient anxiety precesarean section surgery between face acupressure intervention with lavender and citrus aromatherapy at Sentosa Hospital Bogor (p value 0.000).

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## 1. Introduction

Labor is a physiological process that will be experienced by pregnant women. However, childbirth becomes a very scary experience that pregnant women will go through because the process which is partly passed is not easy, both with the pain that will be accepted, the procedures that will be passed and concerns for the safety of themselves and the fetus they are carrying. According to Fiarbrother, N et al in 2022 fear of childbirth affects as many as 20% of pregnant women this is related to termination of pregnancy, prolonged labor, increased risk of emergency, elective cesarean section. Currently, delivery by cesarean section is an option for mothers who will give birth with or without indications.

The World Health Organization (WHO) considers the average caesarean section ranging from 5% to 15% as the maximum targeted range in life-saving interventions in terms of childbirth. According to Mylonas, in 2015 the number of cesarean sections increased worldwide in recent years, especially in developing countries. Developed and developing as in North America is 24%. The rate in Europe is around 25%, while in the US the rate is estimated at 32.2%. According to Roy, A et al, in 2021 there will continue to be an increase in deliveries by cesarean section, especially in high-income countries including 30.3% in the United States, 30% in Australia, 28% in Germany, 26% in Canada, and 22% in England. In Asia alone such as Bangladesh about 23% and India 17%. Meanwhile, in Indonesia, the rate of deliveries by cesarean section increased to 18.5% in 2017. According to the 2018 RISKESDAS, the rate of deliveries by cesarean section in West Java reached 15.48%. For deliveries by cesarean section at Sentosa Hospital itself in 2021 it will be 76% with sc delivery details as many as 1172 and normal deliveries as many as 370. So it is clear that there has been a drastic increase in deliveries by cesarean section in recent years and has become one of the options for mothers to give birth with or without indications that aim to save the mother and baby.

With the development of scientific progress, socio-cultural changes, and medicolegal considerations seem to be the main reasons for the increasing acceptance of caesarean sections. With the increasing number of deliveries through cesarean section which is one of the efforts to reduce maternal and infant mortality rates, however, in carrying out cesarean section, problems commonly faced by mothers are anxiety facing childbirth with the operation.

Anxiety often occurs in preoperative patients. In the case of a cesarean section, anxiety is exacerbated by the fact that the intervention can have an impact on both the mother and the unborn child. According to Reynaud, et al in 2021 Surgery and preoperative waiting is anxiety over provoking situations. It is estimated that the prevalence of preoperative anxiety ranges from 25 to 80%. According to research conducted by Zuhana et al in 2020, it was concluded that 70% of mothers experienced severe anxiety when undergoing SC surgery. Whereas anxiety is very influential on the physical and psychological mother during and after a cesarean section. High levels of anxiety result in activation of negative physiological manifestations and the autonomic nervous system. These manifestations can slow the healing process, decrease the immune response, and increase the risk of infection, as well as postoperative complications, pain, morbidity, and mortality. In addition, preoperative anxiety can cause hemodynamic problems in the intraoperative period, increased need for analgesics, and lower postoperative patient satisfaction that occurs in the postoperative period. For this reason, it is important to deal with anxiety for mothers during pre-surgery. Giving sedatives to reduce anxiety levels in the mother can be given but of course it has side effects. However, at this time the provision of non-pharmacological therapy can be an option to reduce anxiety in pre-cesarean mothers including hypnotherapy, acupressure, music therapy and aromatherapy therapy as well as providing positive affirmations.

## **2. Method**

This type of research is a quasi-experimental design with a pretest and posttest two group design. The research was conducted at Sentosa Hospital, Bogor. Data collection will be carried out on June 15 – July 15, 2022. The population of this study is patients who gave birth by sectio caesarea electively in June – July totaling 46 people with the technique of sampling technique, namely total sampling. Data were analyzed by univariate and bivariate with Wilcoxon and Mann Whitney test. The data was processed using a computer with the SPSS program.

## **3. Result and Discussion**

The average anxiety in preoperative cesarean section patients before being given positive affirmations with a combination of facial acupressure and lavender aromatherapy is 55.13 with a standard deviation of 8.444. While the average anxiety in patients with preoperative cesarean section after being given positive affirmations with a combination of facial acupressure and lavender aromatherapy is 22.78 with a standard deviation of 1.930.

The average anxiety in preoperative cesarean section patients before being given positive affirmations with a combination of full-blooded facial and citrus aromatherapy is 54.70 with a standard deviation of 7.836. While the average anxiety in patients with preoperative cesarean section after being given positive affirmations with a combination of facial acupressure and citrus

aromatherapy is 30.43 with a standard deviation of 5.290.

There is the effectiveness of positive affirmation of the combination of face acupressure and lavender aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor with a p value of 0.000 ( $p < 0.05$ ). There is the effectiveness of positive affirmation of a combination of full-blooded face and citrus aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor with a p value of 0.000 ( $p < 0.05$ ). There was a difference in the anxiety of preoperative cesarean section patients between the face acupressure intervention with lavender and citrus aromatherapy at Sentosa Hospital, Bogor with a p value of 0.000 ( $p < 0.05$ ).

### 3.1 Conclusion

#### a. **The effectiveness of positive affirmations of a combination of face acupressure and lavender aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor**

The results of the analysis on the effectiveness of the positive affirmation of the combination of face acupressure and lavender aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor using the Wilcoxon test stated that there was an effectiveness of positive affirmation of the combination of facial acupressure and lavender aromatherapy on the anxiety of patients with preoperative cesarean section at Sentosa Hospital Bogor with p value 0.000 ( $p < 0.05$ ).

The results of this study are in line with research conducted by Violleta (2019) on the effect of lavender aromatherapy on reducing anxiety in preoperative SC mothers at M Zein Painan Hospital which stated that the average level of anxiety before the intervention was 57.21 with a standard deviation of 2.981. Meanwhile, after the intervention of giving lavender aromatherapy, there was a decrease in the mother's anxiety level to 28.71 with a standard deviation of 3.987. The results of statistical tests showed the effect of lavender aromatherapy on reducing anxiety in preoperative SC mothers at M Zein Painan Hospital with a p value of 0.004.

The same study was conducted by Hassanpour et al (2017) about the effect of using lavender essential oil on the anxiety of pre-upper extremity reconstruction surgery patients who stated that the average level of anxiety before the intervention was 56.88 and after the intervention was 40.86. The results of statistical tests showed that there was an effect of using lavender essential oil on the anxiety of patients with pre-extremity reconstruction surgery with a p value of 0.001.

According to the theory of anxiety or anxiety is an individual response to an unpleasant situation and experienced by all living things. Actually anxiety is a normal thing for every human being, but anxiety becomes abnormal if it is responded to unrealistically, excessively, and causes physical, psychological, and social disturbances. Anxiety is an emotional and subjective experience without a specific object so that a person feels an anxious feeling (worried) as if something bad will happen and is generally accompanied by autonomic symptoms that last for some time (Pieter, Janiwarti, & Saragih, 2013).

The main psychological symptom of anxiety is feeling afraid or worried in situations where a person feels threatened. According to Mulugeta, H (2018) said that Preoperative anxiety has also been found to contribute to other postoperative problems such as nausea and vomiting, tachycardia, hypertension, and an increased risk of infection.

According to Salmanzadeh, A et al in 2018 in his journal stated Factors that influence anxiety include: preoperative complications, day of surgery complications and concerns about the outcome, concerns about lack of control, risk of death, unfamiliar situations. Preoperative anxiety stimulates the Sympathetic Nervous System (SNS), Parasympathetic Nervous System (PNS) and Endocrine System, which in itself causes an increase in heart rate, blood pressure and cardiac stimulation, ultimately resulting in cardiac arrhythmias. One way to overcome anxiety in mothers is by giving positive affirmations. According to Puji, Esti and Khusnul, Lailatul (2020) stated that Affirmation is a form of self-affirmation related to positive things. Through these positive words, the brain will indirectly be indoctrinated so that our own perspective will also change. Affirmations can change a person's perspective in dealing with life and the environment around him.

Aromatherapy itself is a method that uses essential oils to improve physical health and also affect a person's emotional health. Aromatherapy, one of the complementary therapies commonly used by nurses, has been proven lower blood pressure and heart rate, and reduce pain and anxiety (Karaman, Z Bilican P, 2017). Aromatherapy can enter the body through 3 main routes, namely ingestion, olfaction (inhalation), and absorption through the skin. In this study, researchers used the

olfaction method (inhalation) because access to aromatherapy through the nose is a much faster route than other methods of dealing with emotional problems such as anxiety, stress and depression. This inhalation process inhales the palms that have been rubbed with each other 3 times, then the respondent is asked to relax, then the respondent repeats inhaling the aromatherapy lavender on the palms in the previous way, and then relax, giving this intervention for 15 minutes.

According to the researcher's analysis, in this study there was an effect of giving positive affirmations a combination of full-blooded face and lavender aromatherapy on the anxiety of pre-SC mothers. When aromatherapy is inhaled, the volatile molecules of the oil are carried by air currents to the "roof" of the nose where soft cilia emerge from the receptor cells. When the molecules attach to the hairs, an electrochemical message will be transmitted through the olfactory tract into the limbic system. This will stimulate memory and emotional response. The hypothalamus acts as a relay and regulator, giving rise to messages that must be conveyed to other parts of the brain and other parts of the body.

**b. The effectiveness of positive affirmations of a combination of facial acupressure and citrus aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor**

The results of the analysis on the effectiveness of the positive affirmation of the combination of full-blooded facial and citrus aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor using the Wilcoxon test stated that there was an effectiveness of the positive affirmation of the combination of full-blooded face and citrus aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor with p value 0.000 ( $p < 0.05$ ). The results of this study are in line with research conducted by Echy Rahmadhani (2019) on the effect of citrus aromatherapy on reducing anxiety in maternity mothers at the Bunda Clinic which stated that there was an effect of citrus aromatherapy on anxiety reduction in maternity mothers with a p value of 0.023.

The same study was also conducted by Tayebi Sahrae (2020) on the effect of lavender and citrus aromatherapy on reducing anxiety, stress and depression in hemodialysis patients which stated that before the intervention the level of anxiety, stress and depression of respondents was 78.1% in the severe category and only 21,9% with mild category. Meanwhile, after the intervention, the level of anxiety, stress and depression of respondents was 43% in the severe category and only 57% in the mild category. The results of statistical tests stated that there was an effect of citrus aromatherapy on reducing anxiety, stress and depression in hemodialysis patients with a p value of 0.004.

According to the theory, anxiety can be reduced by several anxiety-reducing therapies, namely pharmacological and non-pharmacological therapies. Benzodiazepines, buspirone, and antidepressants can be pharmacological therapies to reduce anxiety disorders which are usually chronic while non-pharmacological therapies to reduce anxiety are psychological therapy, psychotherapy, cognitive-behavioral and insight-oriented which include relaxation, breathing exercises and distraction (Husny, 2018).

One way to reduce anxiety is by giving aromatherapy. Several studies have shown that inhalation of aromatherapy can reduce a person's level of anxiety (Indrati, 2019). Aromatherapy is a therapeutic action using essential oils that are useful for improving a person's physical and psychological state to be better. Each essential oil has a unique pharmacological effect, such as antibacterial, antiviral, diuretic, vasodilator, sedative, and adrenal stimulating (Ana, 2010).

According to the analysis of researchers in this study, there was an effect of giving positive affirmations a combination of full-blooded facial and aromateray citrus sinensis with reducing anxiety in pre-SC mothers. It can be concluded that aromatherapy is indeed good for reducing anxiety because the working principle of aromatherapy provides a sense of calm. So in the future, mothers who will do SC are advised to use aromatherapy, one of which is citrus to reduce anxiety before surgery.

**c. Differences in anxiety in patients with preoperative cesarean section between a full-blooded face intervention with lavender and citrus aromatherapy**

The results of the analysis of the difference in anxiety of preoperative cesarean patients between facial acupressure intervention with lavender and citrus aromatherapy at Sentosa Hospital Bogor using the Mann Whitney test stated that there was a difference in anxiety of preoperative cesarean section patients between facial acupressure intervention with lavender and citrus

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aromatherapy at the hospital. Sentosa Bogor with a p value of 0.000 ( $p < 0.05$ ).

The same study was also conducted by Tayebi Sahrae (2020) about the effect of lavender and citrus aroma therapy on reducing anxiety, stress and depression in hemodialysis patients who stated that there were differences in reducing anxiety, stress and depression in hemodialysis patients between the groups given lavender aromatherapy and citrus aromatherapy with p value 0.001. According to the theory, undergoing a surgical or operative procedure will provide an emotional reaction for a mother and her family. Preoperative anxiety is an anticipatory response to an experience that can be perceived as a threat to its role in life, body integrity, or even life itself. It is well known that a troubled mind will directly affect bodily functions, which can make postpartum more difficult, put additional strain on the development of the mother and newborn relationship, and lead to a bad birthing experience for the mother (Sari, 2019).

This study is in line with research conducted by Mardayenti (2018) about the effect of giving aromatherapy inhalation to reducing anxiety in maternity mothers who stated that there was an effect of giving aromatherapy used, namely lavender, rose and citrus aromatherapy on reducing anxiety in maternity mothers with a p value value  $< 0.05$ . Anxiety reduction can be done by giving aromatherapy such as lavender and citrus aromatherapy. Some of the chemicals contained in aromatherapy include citral, citronellol, geraniol, linalol, nerol, eugenol, phenylethyl, alcohol, farnesol, nonyl, and aldehydes (Utami, 2013). When aromatherapy essential oils are inhaled, volatile molecules will carry the aromatic elements contained therein such as geraniol and linalol to the top of the nose where cilia emerge from the receptor cells. When the molecules attach to the hairs, an electrochemical message will be transmitted through the olfactory tract into the limbic system. This will stimulate memory and emotional response. The hypothalamus, which acts as a regulator, gives rise to messages that must be conveyed to the brain.

According to the analysis of researchers in this study, the full-blooded face intervention with a combination of lavender and citrus aromatherapy had the same effect on reducing anxiety in pre-SC mothers. This is because the working principle of aromatherapy affects sensory receptors to increase a sense of calm. However, in this study, lavender aromatherapy was better than citrus aromatherapy.

In this study, lavender aromatherapy was more effective in reducing anxiety in pre-SC mothers. This is triggered because Based on the journal presented by Esmail, Seyed et al in 2017 lavender aromatherapy contains citral which acts as an anti-inflammatory so that it reduces a little inflammation of the pain that is being felt by the mother so that it can make the mother calmer. Next is citronellol which functions to give a fragrant and fragrant taste to lavender aromatherapy so that when the mother inhales lavender aromatherapy with the perceived fragrance it can have a calming effect on the mother. Furthermore, the lavender aroma also contains geraniol which plays a role in increasing the work of the hypothalamus to suppress the work of endorphins so that it can have a relaxing effect on the mother. In addition, lavender aromatherapy also contains linalol, nerol, eugenol, phenylethyl which functions in stimulating the hypothalamus which acts as a regulator to bring out messages that must be conveyed to the brain. The message received is then converted into action in the form of electrochemical compounds that cause feelings of calm and relaxation and can accelerate blood flow.

While in citrus aromatherapy there is no citral content that acts as an anti-inflammatory so there is no pain reduction and relaxation effect on pain in citrus aromatherapy. In addition, citrus aromatherapy does not contain geraniol which plays a role in increasing the work of the hypothalamus to suppress the work of endorphins so that it does not add to the comfortable effect on the mother. So that the difference in aromatherapy content makes a difference in decreasing anxiety between the two groups.

**Table 1**

Average anxiety in patients with preoperative cesarean section before and after given positive affirmations a combination of full-blooded face and lavender aromatherapy at Sentosa Hospital, Bogor

Worry	N	mean	SD	Min - Max	95% CI
Before	23	55.13	8,444	45 - 69	51.4 - 58.7
After	23	22.78	1,930	20 - 25	21.9 - 23.6

**Table 2**

Average anxiety in patients with preoperative cesarean section before and after given positive affirmations a combination of full-blooded face and Citrus aromatherapy at Sentosa Hospital, Bogor

Worry	N	Mean	SD	Min - Max	95% CI
Before	23	54.70	7,836	45 - 69	51.3 - 58
After	23	30.43	5,290	24 - 49	28.1 - 32.7

**Table 3**

The effectiveness of the positive affirmation combination of face acupressure and lavender aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor

Worry	N	mean	SD	MD	P value
Before	23	55.13	8,444	32.35	0.000
After	23	22.78	1,930		

**Table 4**

Effectiveness of positive affirmations combination of face acupressure and citrus aromatherapy on the anxiety of preoperative cesarean section patients at Sentosa Hospital Bogor

Worry	N	mean	SD	MD	P value
Before	23	54.70	7,836	24.27	0.000
After	23	30.43	5,290		

**Table 4.6**

Differences in anxiety in patients with preoperative cesarean section between Interventions full-blooded face with lavender and citrus aromatherapy at Sentosa Hospital Bogor

Group	N	mean	SD	MD	P value
Lavender	23	22.78	1,930	7.65	0.000
Citrus	23	30.43	5,290		

#### 4. Conclusion

Based on research conducted by Puji, Esti and Khusnul, Lailatul (2020) proved that positive affirmations given for 15 minutes had an effect on correspondent anxiety by 46% compared to the control variable. In addition to positive affirmations, one of the efforts to reduce anxiety in mothers is to combine it with full-blooded face as a relaxation technique and also stimulate hormone production accompanied by aromatherapy. According to Wang R in 2022 in his journal stated that A quasi-experimental pre- and post-test study (without a control group) reported that one 15-minute hand massage session helped reduce preoperative anxiety levels and increase satisfaction.

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