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EFFECTIVENESS OF EMOTIONAL FREEDOM TECHNIQUES (EFT) AND AROMATHERAPY OILS IN REDUCING ANXIETY IN THIRD TRIMESTER PREGNANT WOMEN

Karnilan Lestari Ningsi Sam
Diploma III in Midwifery, Politeknik Borneo Medistra, Jl. Three No. 99, Mount Samarinda, North Balikpapan, Mt. Samarinda, North Balikpapan, East Kalimantan 76125, Indonesia
nilanlestari99@gmail.com

ABSTRACT
Studies show that the global incidence of anxiety is 23% in Alberta, Canada, 15,6% in Germany, and 49% in Pakistan. Anxiety in pregnancy is related to depression which affects the mother and baby, besides that it can pose risks to the mother's mental health such as increasing the risk of depression after giving birth. Objective: to find out the Effectiveness of Emotional Freedom Techniques (EFT) and Aromatherapy Oils in Reducing Anxiety in Third Trimester Pregnant Women. Method: using the true experimental design method using one group design, pre test-post test design, sampling technique using purposive sampling. Pregnant women will have their Anxiety scale measured using the State Anxiety Invantory Score (STAI), data analysis is carried out univariately to describe the frequency distribution and bivariately using the Wilcoxon test. Results: The average anxiety score for the Pre Test was 2,31 and the Post Test was 1,31. The results of the Wilcoxon signed rank test statistic show that the value is $\rho < 0,001$. Conclusions: The effectiveness of Emotional Freedom Techniques (EFT) and aromatherapy oils based on the Wilcoxon signed rank test statistical test can be seen with a value of $\rho < 0,001$, which means it is proven to reduce anxiety in third trimester pregnant women.

Keywords: anxiety; aromatherapy; EFT; pregnancy

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INTRODUCTION

Anxiety is a common thing in pregnancy (Bayrampour et al., 2016). Anxiety in pregnancy is defined as excessive worry and fear about pregnancy, childbirth, the baby's health and parenting patterns after the baby is born (Bedaso et al., 2021). Studies show that the global incidence of anxiety is 23% in Alberta, Canada, 15,6% in Germany, and 49% in Pakistan. (Silva et al., 2017). Anxiety in pregnancy is related to depression which affects the mother and baby, besides that it can pose risks to the mother's mental health such as increasing the risk of depression after giving birth. (Newham et al., 2012). Research shows that 7 out of 11 articles related to pregnant women's anxiety can result in premature births, low birth weight babies, births not according to gestational age, small head circumference at birth. (Grigoriadis et al., 2018). Preeclampsia, low Apgar scores, changes in fetal blood circulation and babies have a 2-fold risk of being treated in the NICU (Domínguez-Solís et al., 2021).

One strategy that can help reduce complications and unwanted births as a result of anxiety which is part of mental illness is providing social support to pregnant women such as emotional, instrumental support, Aromatherapy Massage and Emotional Freedom Techniques (EFT). Massage and aromatherapy are effective in reducing anxiety levels, stress hormones, sleep disorders, back pain and reducing postpartum complications, increasing feelings of happiness, reducing pregnancy complications, reducing fetal depression and premature birth, reducing pain. (Bastard & Tiran, 2009; Bedaso et al., 2021; Biana et al., 2021; Field et al.,

1999, 2009, 2012; Irmak Vural & Aslan, 2019). Apart from that, Emotional Freedom Techniques (EFT) is also effective in overcoming anxiety, depression, fatigue, stress and fear (Dincer & Inangil, 2021). The results of the study show that EFT can reduce cortisol levels thereby reducing depression (Church et al., 2012). Proven to be used to reduce weight and psychological symptoms in adults who are overweight with care given for 2 years (Stapleton et al., 2020). Other research shows that EFT is a more effective treatment than conventional treatment for sufferers of Post Traumatic Stress Disorder (PTSD), accompanying symptoms of PTSD, treating anxiety sufferers and can reduce fear of childbirth. (Church et al., 2013; Church & Feinstein, 2017; Clond, 2016; Irmak Vural & Aslan, 2019). Therefore, research related to EFT and aromatherapy oils to reduce anxiety in pregnant women is very necessary. Objective research to find out the Effectiveness of Emotional Freedom Techniques (EFT) and Aromatherapy Oils in Reducing Anxiety in Third Trimester Pregnant Women.

METHOD

This research uses a true experimental design method using one group design, pre test-post test design. The population in this study were all pregnant women who had their pregnancies checked at the Gunung Samarinda Health Center and Batu Ampar Health Center. The sampling technique was purposive sampling, with the inclusion criteria for this research being pregnant women in the third trimester with anxiety, pregnant women who did not take anti-depressant medication. The exclusion criteria for this study were pregnant women in the third trimester with depression. Pregnant women will have their anxiety scale measured using the State Anxiety Invantory Score (STAI) before and after treatment.The research instruments are State Anxiety Invantory Score (STAI) questionnaire from Spielberger in the Emotional Freedom Techniques (EFT) and Aromatherapy oil interventions. Data analysis was carried out univariately to describe the frequency distribution and bivariately using the Wilcoxon test to see the effectiveness of EFT and aromatherapy oils in reducing anxiety in third trimester pregnant women.

RESULT

Table 1
Respondent Characteristics Based on Age (n=32)

Age	f	%
21-25 years old	10	31,3
26-30 years old	10	31,3
31-35 years old	9	28,1
36-40 years old	3	9,4

Table 2.
Respondent Characteristics Based on Number of Pregnancies (n=32)

Number of Pregnancies	f	%
First	12	37,5
Second	9	28,1
Third	6	18,8
Fourth	5	15,6

Table 3.
Respondent Characteristics Based on Gestational Age (n=32)

Gestational Age	f	%
28-32 weeks	14	43,8
33-37 weeks	15	46,9
38-42 weeks	3	9,4

Table 4.
Respondent Characteristics Based on Education (n=32)

Education	f	%
SD	1	3,1
SMP	4	12,5
SMA	17	53,1
College	10	31,3

Table 5.
Respondent Characteristics Based on Job (n=32)

Job	f	%
Housewife	26	81,3
Employee	6	18,8

Table 6.
The Effectiveness of Emotional Freedom Techniques (EFT) and Aromatherapy Oils in Reducing Anxiety in Third Trimester Pregnant Women

Variable	N	Mean		z	ρ
		Pre Test	*Post Test*		
Emotional Freedom Techniques (EFT) and Aromatherapy Oils	32	2,31	1,31	-5.657	0.000

Based on table 6 above, it shows that the average value of pre-test anxiety is 2,31 and post-test is 1,31. Apart from that, the results of the Wilcoxon signed rank test statistic show that the value is $\rho < 0,001$, which means that there is an effect of reducing the anxiety of pregnant women in the third trimester using Emotional Freedom Techniques (EFT) and Aromatherapy Oils.

DISCUSSION

The table of respondent characteristics shows that most of the characteristics of pregnant women are based on age, the majority are 21-25 years and 26-30 years with 10 respondents each (31.3%). The majority were pregnant with their first child with 12 respondents (37.5%). The majority of gestational age was 33-37 weeks with 15 respondents (46.9%). The majority of education is high school with 17 respondents (53.1%). The majority of jobs are housewives with 26 respondents (81.3%).The table of Effectiveness of Emotional Freedom Techniques (EFT) and Aromatherapy Oils in Reducing Anxiety in Third Trimester Pregnant Women shows that the average value of pre-test anxiety is 2,31 and post-test is 1,31. Apart from that, the results of the Wilcoxon signed rank test statistic show that the value is $\rho < 0,001$, which means that there is an effect of reducing the anxiety of pregnant women in the third trimester using Emotional Freedom Techniques (EFT) and Aromatherapy Oils.This research uses the State Anxiety Invantory Score (STAI) questionnaire from Spielberger, this is in accordance with the Caci article, 2003 which wrote that since 40 years ago Spielberger has proposed two measures of anxiety, namely the State Anxiety Invantory Score (STAI) and has been translated into several languages. and used in more than 3000 published studies (Caci et al., 2003).

Characteristics of the participants

The characteristics of mothers who experience anxiety at the age of 21-30 years and in their first pregnancy are in accordance with research (Ronalen Br. Situmorang, Taufianie Rossita, 2020) which states that there is a significant relationship between maternal age and anxiety in third trimester primiparous pregnant women.The characteristics of gestational age in this study are respondents who were pregnant in the third trimester, gestational age 28-42 weeks,

this is supported by research (Răchită et al., 2023) which states that depression and anxiety are mental health conditions that commonly occur in pregnant women, especially in the third trimester of pregnancy. There are several factors that influence the increase in this condition during pregnancy, such as a history of mental health disorders, a history of depression or anxiety in oneself or in the family, previous traumatic life experiences, high levels of stress, lack of social support and financial difficulties.

Educational Characteristics The majority of respondents were high school or secondary school graduates, this is supported by research (Suyani, 2020) which states that there is a relationship between the level of education and anxiety because a person's level of education is directly related to the knowledge they have, so that the higher a person's level of knowledge, the lower their anxiety level.The job characteristics of respondents are private sector and domestic workers. This research is supported by research (Suyani, 2020) which states that there is a relationship between work and the anxiety of pregnant women because one of the factors that causes anxiety is work, the workload that a person has will make him or her feel incompetent in the world of work if it does not provide maximum results, which can trigger anxiety in a person.

Emotional Freedom Techniques (EFT) and Aromatherapy Oils

Based on table 6, it shows that the Wilcoxon signed rank test statistic shows that the value of $\rho < 0{,}001$ means that there is an effect of reducing the anxiety of pregnant women in the third trimester using Emotional Freedom Techniques (EFT) and Aromatherapy Oils. This research is supported by a systematic review and meta-analysis related to EFT for anxiety conducted by (Clond, 2016) who obtained data that greater use of EFT was associated with greater reductions in anxiety symptoms. Plus, it's supported by research (Dincer & Inangil, 2021) which states that Emotional Freedom Techniques (EFT) is also effective in overcoming anxiety, depression, fatigue, stress and fear compared to the control group.Emotional Freedom Techniques (EFT) is one of a group of therapies collectively called “Energy Psychology” or EP (Church et al., 2012).

EFT is a psychophysiological intervention that combines elements of cognitive psychology therapy (CBT), exposure therapy, and somatic stimulation using acupressure points. Because it includes elements of account pressure, EFT is simply called "tapping". EFT was published in 1995 by Craig and Fowlie as a simplified form of thought therapy in the field. The basic EFT protocol called the “basic prescription” is explained in one of the comprehensive treatment manuals. The EFT protocol breaks the cycle of sympathetic nervous system hyperarousal more quickly than other forms of desensitization, allowing for more rapid reduction of symptoms, and may also benefit physical health. The goal of EFT is to reduce and relieve the client's symptoms of psychological distress, including stress and anxiety (Church et al., 2013; Church & Feinstein, 2017; Clond, 2016; Irmak Vural & Aslan, 2019; Stapleton et al., 2020).

Mechanism of Action and Physiological Biomarkers for Efficacy of EFT and Aromatherapy Oils Treatment

Emotional freedom techniques and acupuncture tapping are thought to downregulate limbic system activity in a similar way to acupuncture. In a functional magnetic resonance imaging investigation of subjects undergoing hand acupuncture, reduced blood flow (indicating reduced activity) was detected in several brain areas associated with memory and stress response, including the amygdala, hippocampus, and nucleus accumbens. In the same way, electroencephalographic recordings of subjects performing EFT showed decreased arousal of

the right frontal cortex, which is a pattern also observed in other forms of neurotherapy (Clond, 2016). In addition to EFT, this research also shows a reduction in anxiety combined with aromatherapy oils.

This research also uses aromatherapy, this is in accordance with research (Jones et al., 2021) which showed that lavender aromatherapy reduces anxiety and is preferred by women during intrauterine insemination fertility treatment. Aromatherapy is one of the treatments that has grown more and more in recent years compared to other complementary treatments. According to a recent systematic review, various essential oils, such as lavender, bergamot, and chamomile, have improved sleep quality and reduced stress, pain, anxiety, depression, and fatigue. This oil helps individuals to relax their body and mind, leading to better quality sleep. Additionally, some aromas may improve slow wave sleep (SWS) and subjective sleep quality (Rahmani et al., 2023). Evidence from different countries shows the rate of aromatherapy use in pregnant women has increased from 13% to 78%. Additionally, the use of aromatherapy is recommended during labor, with no significant side effects reported by mothers and newborns (Tabatabaeichehr & Mortazavi, 2020).

Aromatherapy is a non-pharmacological intervention that is widely used as a complement to therapy. Aromatherapy is the use of essential oils from aromatic plants to prevent and treat disorders, it is a natural way to improve the health of the mind, body and spirit, and can have an influence on individuals both directly and indirectly. Aromatherapy stimulates the olfactory system and then affects the hypothalamus. The result is reduced cortisol and anxiety by reducing the release of the hormone corticotropin. When aromatic aromas are inhaled, the brain releases enkephalins, endorphins, and dynorphins as neurotransmitters that reduce anxiety and pain. (Fatemeh Hajibagheri & Valiani, 2024).

CONCLUSION

The effectiveness of Emotional Freedom Techniques (EFT) and aromatherapy oils based on the Wilcoxon signed rank test statistical test can be seen with a value of $\rho < 0{,}001$, which means it is proven to reduce anxiety in third trimester pregnant women.

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