Effect of Emotional Freedom Technique on Fear of Childbirth and Stress among Primiparous Women during the First Stage of Labor

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Abstract:

Fear of childbirth refers to feelings of uncertainty and anxiety before, during, or postpartum that have negative childbirth outcomes. Emotional Freedom Technique is a psychophysiological intervention that helps in reducing fear of childbirth, posttraumatic stress disorder, improving the individual's negative emotions and managing associated physical disorders. **Aim:** evaluate the effect of Emotional Freedom Technique on fear of childbirth and stress among primiparous women during the first stage of labor. **Design:** Quasi experimental study was used. **Study sample:** A purposive sample of one hundred and two primiparous women was allocated to either the intervention or the control group, with 51 women in each group. **Tools of data collection:** Three tools were used; a structured interview questionnaire, childbirth attitudes questionnaire & subjective units of distress scale. **Results:** The present study findings showed that in the latent, active & transitional phases of labor after applying Emotional Freedom Technique in reducing primiparous women's fear of childbirth & stress at the first stage of labor. **Recommendations:** Utilization of Emotional Freedom Technique as a routine care to reduce fear of childbirth and stress among primiparous women during labor.

Keywords: Childbirth, Emotional Freedom Technique, Fear of childbirth, Primiparous women & Stress.

Introduction:

Childbirth is a multi-dimensional experience and is unique to each woman (Lai et al., 2022). "Fear of Childbirth" (FoC) is the term for the birth phobia before, during, and after pregnancy, it is a psychological phenomenon that often relates to a state of extreme anxiety (Qiu et al., 2020 & Nasr et al., 2020). 80% of women reported having FoC, which can range from typical perinatal anxiety and concerns to pregnancy-specific anxiety (PSA), and finally to a severe phobic fear known as tokophobia (Stoll et al., 2018). In a subgroup analysis according to parity, the prevalence of FoC was 16% in nulliparous versus 12% in multiparous women, according to a systematic review and meta-analysis (O'Connell et al., 2017). In Kenya it was 14% in primigravida and 8% in multigravidas (Onchonga et al., 2020).

According to **Van der Riet et al.**, (2020), pregnant women experience mild, moderate, or severe fear of giving birth. Mild fear is regarded as typical and referred to as a motivating worry that gets women ready for childbirth. A woman may require support to deal with her moderate fear of childbirth because it may be too much for her to cope with it. Concerningly, a woman's severe fear of childbirth can make her less willing to have children and can lead to mental illnesses (G"onenç et al., 2020; **M**[•]**oller, 2019).** Etiology of FoC is likely to be multifactorial as early gestation in older women (> 40 years), younger women with lower levels of education, history of sexual abuse, in sufficient income, smoking, anxiety or depression, high-risk gestation, lack of support, nulliparity, previous caesarean section are all risk factors (**Dencker et al., 2019**).

Despite many people viewing pregnancy as a wonderful stage, in fact, it is a stressful and hard trip that requires a significant emotional adjustment in a reproductive women's life (Engidaw et al., 2019, Camacho-Morell & Esparcia, 2020). Stress is a common mental health problem among pregnant women all over the world. Stress during pregnancy is linked to several unfavorable negative health and behavioral effects, such as a higher risk of gestational hypertension, low birth weight babies, which can ultimately lead to neonatal mortality, cerebral palsy, developmental delays, visual, auditory abnormalities, and blindness. Stress during pregnancy can be classified as general stress and pregnancy-specific stress (PSS). A mother's worries and anxiety about her pregnancy, encompassing labor and delivery, physical parenting, interpersonal relationships, and fetal health, are referred to as PSS (Faramarzi & Pasha, 2018).

Multidisciplinary teams consist of nurses, midwives, perinatologists, social workers, and psychologists utilize different methods to reduce fear of childbirth (Larsson, 2017). These methods include cognitive behavioral therapy, psychoeducation, counseling for expectant mothers' fears, childbirth education classes, music, art therapy, and mind-body practices including, mindfulness, yoga, and relaxation (O'Connell et al., 2017). Emotional difficulties like anxiety, sadness, burnout, stress management, and fears can be effectively treated with Emotional Freedom Technique (EFT) (Irmak Vural & Aslan, 2019).

The Technique of Emotional Freedom is a modality in the field of energy psychology that is easy to learn, use and involves elements of cognitive therapy, acupressure, and exposure therapy (**Bach et al.**, **2019**). Gary Craig created EFT, which involved gentle tapping on 12 acupressure sites (acupoints) on the body. The "Basic Recipe," or the fundamental EFT protocol, has eight points, effective in managing problems such as anxiety, phobia, and posttraumatic stress disorder (**Church, 2018**).

Emotional freedom is thought to boost the hypothalamic-pituitary-adrenal axis which in turn initiates the stress response and to decrease once the stress has passed. However, stress hormones like cortisol, norepinephrine, and adrenaline continue to be released when pressure is constant, as it is frequently in modern life. This repeated stimulus increases activity in the amygdala, hippocampus, and brain regions linked to anxiety (Gilomen & Lee, 2015). The amygdala has been found to be active during acute pain in neuroimaging investigations. Acute amygdala inactivation can start standardizing motion through neuroplasticity, leading to long-term physiological and therapeutically important effects (Qiu et al., 2016).

Significance of the study:

Childbirth can cause discomfort, pain, and fear for laboring women. Furthermore, it should be noted that fear typically associated with is maternal psychological discomfort, which raises catecholamine levels and prevents the normal release of oxytocin leading to prolonged labor. As a result, fear is thought to increase the risk of various complications during childbirth such as higher rates of caesarean sections, prolonged labor, postpartum depression, and delayed mother-baby attachment (Van der Riet et al., 2020; Dwiarini et al., 2022).

The prevalence of fear of childbirth was found to be 42.4% in Turkey with severe level reported by 38.7% in nulliparous, and 45.5% in multiparous women (Gökçe İsbir et al., 2022). In Egypt, Osman et al., (2021) reported that (36.3%) of the studied group had high level of fear, (46.3%) had moderate level, and

(17.5%) had low level of fear of childbirth. About 289000 women worldwide died because of consequences related to pregnancy and childbirth maternal distress included 800 maternal deaths daily (**Murtaja & Thabet, 2017**).

In a study conducted in the Netherlands, maternal distress accounted for 12.3% with 11.7% of them anxious, 17.9% depressed and 20.6% stressed. The transition from girlhood to motherhood is the most stressful and disruptive life transition worsened by bad experiences in labor. It needs a lot of attention to minimize the associated depression and anxiety states (Li et al., 2017).

Emotional freedom technique is one of the most wellknown and often practiced forms of energy therapy, and meta-analyses have shown that it is beneficial in treating anxiety, depression, burnout, phobias, and stress (Irmak Vural & Aslan, 2019; Inangil, 2020). Additionally, Irmak Vural & Aslan (2019); Ghamsari & Lavasani, (2015) reported that EFT was effective in reducing fear and stress of childbirth. Limited studies discussed the effect of emotional freedom techniques on fear of childbirth and stress. So, the aim of this study was to evaluate the effect of emotional freedom techniques on fear of childbirth and stress among primiparous women during the first stage of labor.

Aim of the study:

This study aimed to evaluate the effect of Emotional Freedom Technique on fear of childbirth and stress among primiparous women during the first stage of labor.

Operational definitions:

Emotional Freedom Technique: It is an alternative therapeutic method used to treat anxiety, post-traumatic stress disorder (PTSD), fear and some other physical problems.

In this study it refers to tapping on different body parts of the laboring women to enhance energy and alleviate fear of childbirth and stress.

Fear of childbirth: Is abroad term used to describe different types of anxiety and fears that women experience about pregnancy and childbirth.

In this study it refers to primiparous women become anxious, fear from labor, fear from die or having negative thoughts to the fetus.

Stress: Is the act of exposing a pregnant woman to psychological or physical stress, which might be brought on by environmental challenges or daily life.

In this study it refers to primiparous women are being physically or emotionally under strain during labor.

Hypotheses of the study:

Hypothesis I: Primiparous women who practice Emotional Freedom Technique have less fear of childbirth level than those who don't. **Hypothesis II:** Primiparous women who practice Emotional Freedom Technique have less stress of childbirth than those who don't.

Subjects and Method: Study design:

Researchers utilized quasi-experimental study (QED). QED is a tool used to infer the casual treatment effects, patients or clusters of patients are divided into intervention and control groups (**Maciejewski**, **2020**). It has higher external validity and is pragmatic because they evaluate the real-world efficacy of an intervention in non-laboratory conditions (**Schweizer**, **2016**). In the current study, the effect of Emotional Freedom Technique "independent variable" on fear of childbirth & stress "dependent variables" were assessed.

Study setting:

The labor and delivery unit at Mansoura University Hospitals, Mansoura City, Egypt was the selected setting for this study. It is an educational hospital that provides routine health care for Mansoura City's population and its surrounding rural areas. The previous setting was located on the first floor of the main hospital's building, it has four different rooms: the admission, examination, normal delivery, and postpartum rooms. About eighty laboring women / month visit the unit for delivery on (Sunday, Tuesday & Thursday).

Sample type: A purposive sample was used.

Study subjects: The sample included 102 laboring women divided into the intervention and control group each contained 51 women that were selected from the previously mentioned setting according to:

Inclusion criteria:

- Age: 18-35 years old.
- Primiparous women.
- Normal Labor.
- Single living fetus.
- Fetal head presentation.
- Being at the 1st stage of labor.

Exclusion criteria:

- Pregnant women with maternal or fetal risk (e.g., multiparity and preeclampsia).
- Having psychological disorders.
- Having analgesics or epidural anesthesia.

Calculation of the study sample:

Using G 'power' version 3.1, and according to the study of **Irmak Vural & Aslan**, (2019) to calculate the study sample in which the mean score in emotional freedom group was 3.86 ± 1.44 and the mean score in control group was 5.94 ± 1.78 . Which was significant at P<0.05 level. Where effect size =0.5 with a significance level ($\alpha = 0.05$) with

statistical power = 80%. The calculated total sample was (102) women, (51) women for each group.

Tools of data collection:

After extensive review of national and international related literatures as (Dincer & Inangil, 2021, Xanthou, 2020, Irmak Vural & Aslan, 2019, Jha et al., 2018 & Astriani et al., 2018 & Beshry, 2016) researchers adopted tool II & III and designed tool I. Tacel L Structured Interview Operationnaire

Tool I. Structured Interview Questionnaire:

It included data related to basic demographic data such as age, educational level, occupation, residence & gestational age in weeks.

Tool II. Childbirth Attitudes Questionnaire (CAQ)

This tool was adopted from **Lowe** (2000) to assess the level of childbirth fear. It consisted of a 16-item questionnaire such as (I am afraid of giving birth, I am afraid of painful labor contractions....., etc.) with a 4-point scale (1 = no fear, 2 = mild fear, 3 = moderate fear, 4 = high fear).

Scoring system of CAQ:

The total score ranged from (16 - 64), the higher score indicates higher level of FOC, a score (≤ 32) is considered low fear while a score (33-48) refers to moderate fear and a score (> 48) represents a high level of fear (**Abd El- Aziz et al., 2017**).

Tool III: The Subjective Units of Distress Scale (SUD):

This tool was adopted from **Wolpe** (1990). It is a widely self-report scale used to evaluate the individual's level of subjective distress on a scale of (0 - 10). A score of (0) indicates that there is no sense of distress, and (10) indicates that the distress is nearly intolerable. Participants assign a score based on their current level of distress. This rating offers simple, measurable information on the subjectivity of the person at the time of implementation and displays the change after the application.

Validity of tools:

The validity of the study tools was tested and injured by three experts from Obstetric Nursing field to test their content, formats, length and clearance of words and the recommended modifications were done either by simplifying or omitting some words.

Reliability of the tools:

The internal consistency of childbirth attitudes questionnaire was estimated with the Cronbach alpha coefficient equal (0.84). While reliability of the subjective units of distress scale was assessed with Pearson correlation (test- retest) and it was (0.93) which means high reliability of tools.

Ethical considerations:

Researchers obtained an ethical approval letter from Research Ethics Committee, Faculty of Nursing, Mansoura University, Egypt (Ref. No. p 0353). Also, approval was attained from the director of Mansoura University Hospitals to conduct the study at the labor and delivery unit. A written consent was obtained from each primiparous woman after clarifying the aim of the study. All women were obtained the right to incomplete the study at any time also the collected data for only the purpose of scientific research.

Pilot study:

A pilot study was conducted on 10 percent of the total study sample (10 primiparous women) to assess clearance and applicability of the utilized tools, and to estimate the time required to complete it. Women in the pilot study weren't added to the total sample.

Research process:

The current study was conducted in January 2023 to the end of June 2023. The researchers attended the labor and delivery unit three days/week (Sunday, Tuesday & Thursday) from 9 a.m. to 2 p.m. to accomplish the required sample. The research process included three phases: preparatory, implementation and evaluation phase.

Preparatory phase:

After massive review of the national and international related articles, the data collection tools were prepared. Written consent was obtained from each primiparous women after clarifying the study's aim for each one and assuring the eligibility for participation.

Implementation phase:

According to the control group:

- At first researchers asked women about their demographic data as age, level of education, residence & gestational age.
- Only the routine hospital care was prescribed by obstetricians for this group at the 1st stage of labor.
- The primiparous women's fear of childbirth and stress were assessed at the first stage of labor (as a pretest), researchers used the tool II & III.

For the intervention group:

- Each woman included was interviewed, greeted separately, and informed about the aim of the study. Also, the researchers obtained the consent of the women and stress their ability to retreat from the study. During this interview demographic data of women was obtained, fear of childbirth and stress were assessed at the beginning of the first stage of labor by using tools II & III as a pretest.
- Besides the routine care performed during the 1st stage of labor, the participants of this group were asked to apply Emotional Freedom Technique with the help of the researchers in between uterine contractions for 5 minutes during the latent, active, and transitional phase of the first stage of labor.
- Emotional Freedom technique was performed for each woman as the following:

Emotional Freedom Technique tapping

The Basic Recipe, which is the EFT protocol, consisted of the stages below (Irmak Vural & Aslan, 2019).

- 1. At the beginning, the researchers evaluated fear of childbirth and stress level (pretest), after this step the researcher helped and encouraged each primiparous laboring woman to take deep breathing to relax.
- 2. Tap on the side of the hand point (acupressure) while saying a setup combining an issue statement from exposure therapy and an acceptance statement from cognitive therapy, such as "each woman said a statement of even though she has feelings of fear and stress of childbirth, however, she deeply and deeply accepts herself."
- 3. Say a reminder Phrase like "This feeling of fear of childbirth and stress" while tapping on 8–12 EFT acupoints as (side of hand, top of head, eyebrow, side of eye, under eye, under nose, under mouth, collarbone and under arm) is effective (**Figure 1**).
- 4. Finish all 9 Gamut Procedures. Taps on the Gamut point on the back of the hand (based on the concepts of Eye Movement Desensitization and Reprocessing, or EMDR) while making certain eye movements, singing, and counting while keeping the problem in mind.
- 5. Continue tapping the 8–12 acupoints.
- 6. After that researcher checked for any changes in the symptoms by rating the level of intensity of fear of childbirth and stress.

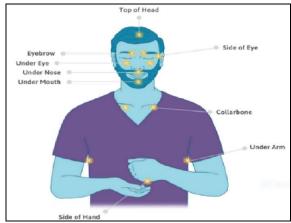


Figure (1): Taping points of Emotional Freedom Technique adopted from (Dincer & Inangil, 2021; Carpenter, 2022).

Evaluation phase:

Two outcomes were assessed in this phase.

Fear of childbirth was the first outcome. It was assessed using tool II, then stress of childbirth was assessed using tool III for the control and intervention group at the latent, active, and transitional phases of the first stage of labor.

Statistical analysis:

"IBM SPSS Statistics Version 23 for Windows Package Program" was used to analyze the data. Numerical data were described using means and standard deviations, whereas categorical data were shown as percentages and numbers. The variables of the study groups were compared using both the t-test for numerical measurements and the chi-square test for categorical variables. Reliability of the study's tools was tested by Cronbach's Alpha and Pearson Correlation. According to **Infanger & Schmidt-Trucksäss (2019)**, a p-value of 0.05 was the cutoff for statistical significance

Results:

Demographic data	Intervention group (n =51)		Control group (n =51)		Significance Test	P- value
	No	%	No	%	1051	value
Age in (years)						
18 - < 24	23	45.1	20	39.2	$X^2 = 0.86$	0.65
24 - < 30	17	33.3	16	31.4	$\mathbf{\Lambda} = 0.80$	
30 - 35	11	21.6	15	29.4		
Mean ± SD	25.43	± 4.32	26.14 ± 4.81		T=0.78	0.44
Educational level						
Illiterate	16	31.4	17	33.3	$X^2 = 0.39$	0.82
Middle education	22	43.1	19	37.3	A = 0.39	
High education	13	25.5	15	29.4		
Occupation Housewife	37	72.5	41	80.4	$X^2 = 0.87$	0.35
Working	14	27.5	10	19.6		
Residence Rural	34	66.7	39	76.5	$X^2 = 1.21$	0.27
Urban	17	33.3	12	23.5		
Gestational age at birth/weeks Mean ± SD	37.45 ± 1.10		37.14 ± 1.15		T= 1.41	0.16

Table (1): Demographic data of the studied groups (N= 102).

Chi square for Qualitative data & student t test for Quantitative data. Statistically significant at p < 0.05

Table (2): Mean differences between the studied groups regarding fear of childbirth at the beginning of the 1st stage, latent, active, and transitional phases of labor.

Childbirth Attitudes Questionnaire	Intervention group (n= 51)		Control group (n=51)		T- test	P- value
	Mean	SD	Mean	SD		
Beginning of the 1 st stage of labor (pretest)	34.82	6.88	33.51	6.96	0.96	0.34
Latent phase.	33.67	6.53	38.71	6.31	3.96	0.001**
Active Phase.	30.88	6.39	43.20	6.48	9.66	0.001**
Transitional Phase.	27.86	5.31	50.37	5.99	20.07	0.001**

** Indicates highly statistically significance (p=0.001).

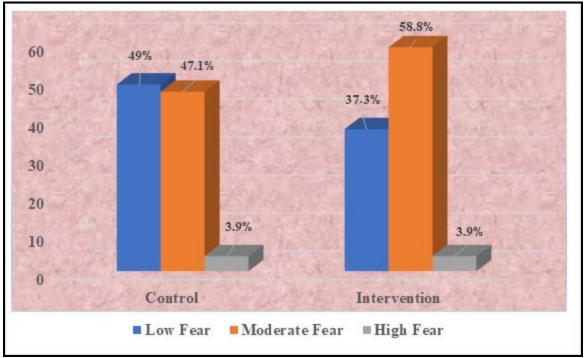


Figure (2): Levels of fear of childbirth between the studied groups at the beginning of the 1st stage of labor.

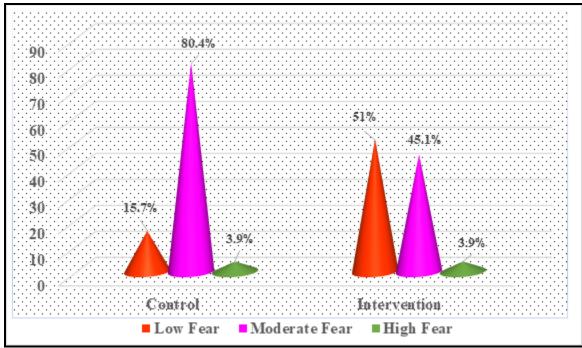


Figure (3): Levels of fear of childbirth between the studied groups at the latent phase of labor.

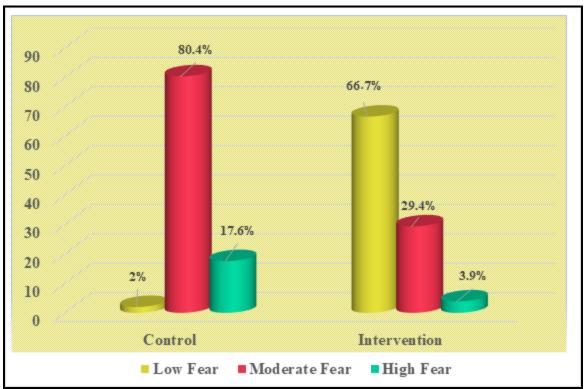


Figure (4): Levels of fear of childbirth between the studied groups at the active phase of labor.

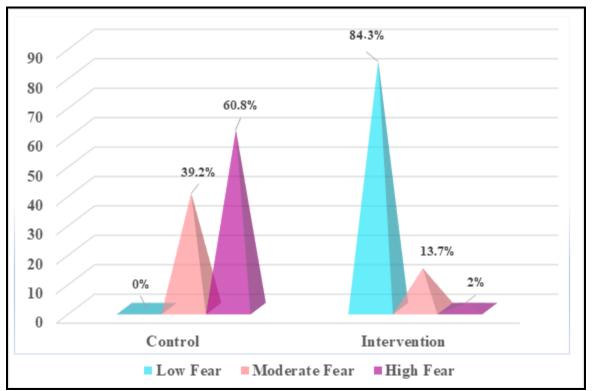


Figure (5): Levels of fear of childbirth between the studied groups at the transitional phase of labor.

Subjective units of distress scale	Intervention group (n= 51)		Control group (n=51)		T- test	P- value	
	Mean	SD	Mean	SD			
Beginning of the 1 st stage of labor (pretest).	4.71	0.83	4.92	0.80	1.34	0.18	
Latent phase.	4.43	0.50	5.76	0.81	9.96	0.001**	
Active phase.	3.78	0.81	6.51	0.67	18.50	0.001**	
Transitional phase.	2.94	0.79	8.51	0.58	40.77	0.001**	

 Table (3): Mean differences between the studied groups regarding stress of childbirth at latent, active, and transitional phases of the 1st stage of labor.

Table (1): Represents no statistically significant differences between both groups in terms of demographic data which reveals that both groups are identical (p > 0.05).

Table (2): Shows no statistically significant difference between the intervention and control groups regarding fear of childbirth at the beginning of the first stage of labor. However, there were highly statistically significant reductions in fear of childbirth at the latent, active, and transitional phases of the first stage in favor of the intervention group (p = 0.001).

Figure (2): Shows no significant differences in levels of fear of childbirth at the beginning of the 1^{st} stage of labor between the studied groups (p value= 0.48).

Figure (3): Illustrates that 51% of the primiparous women in the intervention group have low fear of childbirth at the latent phase of labor compared to only 15.7% in the control group, therefore highly statistically differences are found between both groups (p=0.001).

Figure (4): Clarifies that 66.7% of the primiparous women in the intervention group experience low fear of childbirth versus only 2% for the control group at the active phase of labor with highly statistical differences between two groups (p= 0.001).

Figure (5): Shows that majority of the primiparous women in the intervention group have low fear of childbirth at the transitional phase of labor compared to non in the control group with highly significant difference between the studied groups p = 0.001.

Table (3): Shows no significant difference was found in stress of childbirth between the intervention and control group at the beginning of the first stage of labor. While after applying the EFT, stress of childbirth scores decreased at each time point (latent, active, and transitional phases of labor) with highly statistically significance differences in favor of the intervention group (p = 0.001).

Discussion:

The current study's aim was to evaluate the effect of Emotional Freedom Technique on fear of childbirth and stress among primiparous women during the first stage of labor. The study's findings showed highly significant differences between the two groups as primiparous women who practiced emotional freedom technique had decreased levels of fear of childbirth and stress during each time point (latent, active, and transitional phases of the first stage of labor). As a result, the current study's hypotheses were confirmed "primiparous women who practice emotional freedom technique experience less fear of childbirth and stress during the first stage of labor than those who didn't.

According to results of the current study, primiparous women who practiced Emotional Freedom Technique experienced lower fear of childbirth in each time point as the intervention group suffered less fear of childbirth than those in the control group at (latent, active, and transitional phases of the first stage of labor). The researchers interpreted reduction in fear of childbirth in favor of the intervention group due to emotional freedom technique that had positive effect on reducing fear of childbirth as when the EFT is used, an individual's discomfort or anguish may disappear applied, promoting relaxation and wellbeing.

This result was consistent with the study of **Irmak Vural & Aslan**, (2019) about the effect of emotional freedom technique and breathing awareness on reducing childbirth fear in Istanbul. Both interventions were able to reduce the level of fear experienced at postpartum, but EFT can be said to produce a more positive and lasting effect. They reported significant differences were found between the intervention and the control group regarding fear of childbirth.

Furthermore **Xanthou**, (2020) conducted a qualitative study entitled the effectiveness of Emotional Freedom Techniques'' in people with phobias. The findings demonstrated that EFT was a major and successful self-help technique with a range of effects that may be related to several variables. Three patients reported full and instantaneous recovery, while others acknowledged improvement to varied degrees and one person remained silent.

Identically, Lambert et al., (2022) conducted a study about emotional freedom techniques to improve

wellbeing and reduce anxiety in primary school classrooms and reported that emotional freedom technique was effective in improving wellbeing and reducing anxiety in primary school students. Else, a study of Astriani et al., (2018) entitled utilizing emotional freedom techniques for anxiety in primigravida, Indonesia. EFT therapy for primigravida third-trimester pregnant women is reported to have a p-value= 0.000 effect on anxiety levels. The control group's mean value was 32.31, compared to 18.69 for the intervention group. They concluded that primigravida pregnant women receiving EFT therapy in the third trimester have less anxiety.

In addition to Desoky et al., (2023) studied emotional freedom technique for reducing primary dysmenorrhea intensity among female students. After the program's implementation, there was a highly statistical improvement in both physical and psychological symptoms linked to dysmenorrhea with reduction in the severity of menstrual pain of 22.4% post interventions compared to 54.7% pre interventions (p = 0.05). The previous supported studies reported that emotional freedom technique was an effective, relaxing way enabled women to cope with pain of labor, reduce anxiety and fear. So, the current study hypothesis (I) was ascertained.

Concerning effect of EFT on stress of childbirth, the current results reported that primiparous women who practiced emotional freedom technique experienced lower levels of stress of childbirth at latent, active, and transitional phases of the first stage of labor than those who didn't. Researchers interpreted reduction in stress of childbirth in favor of the intervention group due to this technique that could release anti-stress hormones, increased peripheral circulation, decreased brain wave activity, decreased metabolic status, promotes positive feelings such as optimism, confidence, and calmness (**Yuniarsih, 2018**).

This result was in the same line with **Dincer & Inangil's, (2021)** findings regarding effect of EFT on nurses' stress, anxiety and & burnout levels during the COVID-19 pandemic in Turkey, found that the intervention group experienced significant reductions in stress (p< 0.001), anxiety (p <0.001), and burnout (p < 0.001) than the control group.

The same was reported by **Dincer et al.**, (2022) that students' median scores on the Subjective Units of Disturbance Scale, the State Trait Anxiety Inventory, and the Speech Anxiety Scale were comparable before administering breathing therapy and EFT. While after interventions, there was a substantial decline in the median of previous scales in both groups (p < 0.001). EFT (d=3.18) reduced speech anxiety better than breathing therapy (d=1.46). Additionally, EFT resulted in decrease in perceived stress among pregnant women in Tehran (Iran) (Ghamsari & Lavasani, 2015). Patterson, (2016) reported that EFT was able to lessen tension and anxiety among nursing students. Previous studies stressed the ability of emotional freedom technique in reducing stress. So, the current study hypothesis (II) was achieved.

Conclusion

The current study findings concluded that emotional freedom technique was an effective way, helped in reducing fear of childbirth and stress among primiparous women during the first stage of labor.

Recommendations

The current study recommended that:

- Utilization of Emotional Freedom Technique as a routine care to reduce fear of childbirth and stress among primiparous women during labor.
- In-service training programs for maternity nurses regarding Emotional Freedom techniques.
- Ensure the importance of applying Emotional Freedom Technique in different maternity health settings.

Further studies

- Reapplication of the same study on a large sample to generalize the study findings.
- Evaluate the effect of EFT on pregnancy and postpartum related minor discomforts.

Acknowledgment

The researchers thanks women who were participated in this study.

Conflicts of interest

The researchers declared no conflict of interest.

References

- Abd El-Aziz, S., Mansour, S., & Hassan, N. (2017): Factors associated with fear of childbirth: It's effect on women's preference for elective cesarean section. Journal of Nursing Education and Practice, Vol. (7), No. (1) Pp. 133-46.
- Astriani, M., Pujiastuti, R., & Hadisaputro, S. (2018): Utilization of Emotional Freedom Techniques (EFT) on Anxiety Levels in Primigravida Pregnant Women, International Journal of Science and Research (IJSR), Vol. (7), No. (9), Pp. 393-396.
- Bach, D., Groesbeck, G., Stapleton, P., Sims, R., Blickheuser, K., & Church, D. (2019): Clinical EFT (Emotional Freedom Techniques) improves multiple physiological markers of health. Journal of Evidence-Based Integrative Medicine, Vol. (24), Pp.1–12. <u>https://doi.org/10</u>.
- Beshry, S. (2016): Therapeutic intervention using the emotional freedom technique for depressed patients: A case study. Scientific journal of

- Camacho-Morell, F., & Esparcia, J. (2020): Influence and use of information sources about childbearing among Spanish pregnant women. Women and Birth, Vol. (33), No. (4), Pp. 367-376.
- Carpenter, H. (2022): How Tapping Can Help Relieve Stress and Pain [Web Log Post]. Retrieved from Healthy Nurse, Healthy Nation (HNHN) Quality of Life Website; March 13 https://engage.healthynursehealthynation.org/blogs/ 8/2379.
- Church, D. (2018): The EFT manual (4th ed.). Energy Psychology Press.
- Dencker, A., Nilsson, C., Begley, C., Jangsten, E., Mollberg M., Patel, H., Wigert, H., Hessman, E., Sjöblom, H., & Sparud-Lundin, C. (2019): Causes and outcomes in studies of fear of childbirth: A systematic review. Women Birth: journal of the Australian College of Midwives, Vol. (32), No. (2), 99-111. https://doi.org/10.1016/j.wombi.2018.07.004.
- Desoky, M. M., Hussien, A. A., Ibrahim A. A., & Metwally, H. (2023): Emotional Freedom Technique for Reducing Primary Dysmenorrhea Intensity among Female Students. Assiut Scientific Nursing Journal. Vol, (11) No, (37), Pp. (33 - 24).
- Dincer, B., & Inangil, D. (2021): The effect of Emotional Freedom Techniques on nurses' stress, anxiety, and burnout levels during the COVID-19 pandemic: A randomized controlled trial. Explore (New York, N.Y.), Vol. (17), No. (2), 109–114. https://doi.org/10.1016/j.explore.2020.11.012.
- Dincer, B., Özçelik, S., Özer, Z., & Bahçecik, N. (2022): Breathing therapy and emotional freedom techniques on public speaking anxiety in Turkish nursing students: A randomized controlled study. Explore (New York, N.Y.), Vol. (18), No. (2), Pp. 226–233. https://doi.org/10.1016/j.explore.2020.11.006.
- Dwiarini, M., Chou, H. F., Gau, M. L. & Liu, C.
 Y. (2022): Relationship between Fear of Childbirth, Self-Efficacy, and Length of Labor among Nulliparous Women in Indonesia. Midwifery, Vol. (105), No. (103203). https://doi.org/10.1016/j.midw.2021.103203.
- Engidaw, N., Mekonnen, A., & Amogne, F. (2019): Perceived stress and its associated factors among pregnant women in Bale zone Hospitals, Southeast Ethiopia: a cross-sectional study. BMC research notes, Vol. 12, No. (356), Pp. 2-6. https://doi.org/10.1186/s13104-019-4383-0.
- Faramarzi, M., & Pasha, H. (2018): Psychometric properties of Persian version of prenatal distress questionnaire. Social Behavior and personality,

Vol. (46) No. (5), Pp. 815–822. doi: 10.2224/sbp. 6703.

- G"onenç, I., Aker, M., Güven, H., & Moraloğlu Tekin, "O., (2020): The effect of the personality traits of pregnant women on the fear of childbirth. Perspectives in Psychiatric Care. Vol. 56 No. (2), Pp. 347-354. https://doi.org/10.1111/ppc.12440.
- Ghamsari, M., & Lavasani, M. (2015): Effectiveness of emotion freedom technique on pregnant women's perceived stress and resilience, Journal of Education and Sociology, Vol. (6), No. (2), Pp. 118–122 <u>https://doi.org/10.7813/jes</u>.
- Gilomen, S. A., & Lee, C. W. (2015): The efficacy of acupoint stimulation in the treatment of psychological distress: A meta-analysis. J Behavior Therapy and Experimental Psychiatry. Vol. (48), Pp. 140-148. doi: 10.1016/j.jbtep.2015.03.012. Epub. Mar 31. PMID: 25863484.
- Inangil, D., Vural, P. I., Dogan, S. K., & Körpe, G. (2020): Effectiveness of music therapy and emotional freedom technique on test anxiety in Turkish nursing students: A randomized controlled trial. Eur J Integr Med, Vol. (33), No. (101041), Pp. 1-7. https: / / doi. org / 10. 1016 / j. eujim .2019.101041.
- Infanger, D., & Schmidt-Trucksäss, A. (2019): P value functions: An underused method to present research results and to promote quantitative reasoning. Stat Med, Vol. (38), No. (21), Pp. 4189-4197. https://doi.org/10.1002/sim.8293.
- Irmak Vural, P., & Aslan, E. (2019): Emotional freedom techniques and breathing awareness to reduce childbirth fear: A randomized controlled study. Complementary Therapies in Clinical Practice, Vol. (35), Pp. 224–231. Available at https://doi.org/10.1016/j.ctcp.2019.02.011.
- Gökçe İsbir, G., Serçekuş, P., Yenal, K., Okumuş, H., Durgun Ozan, Y., Karabulut, Ö., Abbasoğlu, D., Gönenç, İ. M., Sarı, E., Aktaş, S., & Erdoğan, S. (2022): The Prevalence and Associated Factors of Fear of Childbirth among Pregnant Women. J Reproductive and Infant Psychology, Vol. (28), Pp.1-16. https://doi.org/10.1080/02646838.2022.2057938.
- Jha, P., Larsson, M., Christensson, K., & Svanberg A. (2018): Fear of childbirth and depressive symptoms among postnatal women: A cross-sectional survey from Chhattisgarh, India. Women Birth. Vol. (31), No. (2), Pp. 122-133. doi: 10.1016/j.wombi.2017.07.003. Epub 2017 Jul 27. PMID: 28756932.
- Lai, T., Kwok, S., Wang, W., Seto, M., & Cheung, K., (2022): Fear of childbirth: Validation study of the Chinese version of Wijma delivery expectancy/experience questionnaire version A. Midwifery. Vol. (104):103188. doi:

10.1016/j.midw.2021.103188. Epub. Oct 28. PMID: 34749123.

- Lambert, M., Smith, S., Moss, S., & Kirshbaum, M. (2022): Emotional Freedom Techniques (Tapping) to Improve Wellbeing and Reduce Anxiety in Primary School Classrooms. Australian Journal of Teacher Education, Vol. (47), No. (3), Pp.72: 92.
- Larsson, B. (2017): Treatment for childbirth fear with a focus on midwife-led counselling. A national overview, women's birth preferences and experiences of counselling. Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine 1341, Pp. 1-77. Uppsala: Acta Universitatis Upsaliensis.
- Li, C., Liu, J., Xiao, X., Chen, X., Yue, S., Yu, H., Tian, F., & Tang, N. (2017): Psychological distress and type 2 diabetes mellitus: a 4-year policemen cohort study in China. BMJ open, Vol. (7), No. (014235), Pp. 1-9. <u>https://doi.org/10.1136/bmjopen-2016-014235</u>
- M"oller, L. (2019): Health, obstetric outcomes, and reproduction in women with vulvar pain or primary fear of childbirth. Linkoping University Electronic Press, Vol. (1681), Pp. 1-72.
- Maciejewski, M. (2020): Quasi-experimental design, Biostatistics & Epidemiology, Vol. (4) No. (1), Pp. 38-47, DOI: 10.1080/24709360.2018.1477468.
- Murtaja, F., & Thabet, A., (2017): Anxiety and depression among pregnant women in the Gaza Strip. Psychological and Cognitive Sciences. Open J. Vol. (3), No. (4), Pp. 137-144. doi: 10.17140/PCSOJ-3-136
- Nasr, H., Alshehri, N., Almutairi, A., & AbdElmenim, F. (2020): Fear from Childbirth among Pregnant Women. Open Access Library Journal, Vol. (7), No. (6427), Pp. 1-13. https:// doi. org/ 10.4236/oalib.1106427.
- O'Connell, M., Leahy-Warren, P., Khashan, A., Kenny, L., & O'Neill, S. (2017): Worldwide prevalence of tokophobia in pregnant women: systematic review and meta-analysis. Acta Obstet Gynecol Scand, Vol. (96), No. (8), Pp. 907–20. https://doi.org/10.1111/aogs.13138.
- Onchonga, D., Moghaddam Hosseini, V., Keraka, M., & Várnagy Á. (2020): Prevalence of fear of childbirth in a sample of gravida women in Kenya, Sexual & Reproductive Health care, official journal of the Swedish Association of Midwives, Vol. (24). No. (100510). Pp. 1-5. https://doi.org/10.1016/j.srhc.2020.100510.
- Osman, B., El-Adham A., & Elrefaey A. (2021): Primigravida Women's Fear of Childbirth and Its Effect on Their Decision Regarding Mode of

Delivery. Tanta Scientific Nursing Journal. Vol. (22), No. (3), Pp.76-100. doi: 10.21608/tsnj.2021.196624.

- Patterson, S. (2016): The effect of emotional freedom technique on stress and anxiety in nursing students: A pilot study, Nurse Education Today. Vol. (40), Pp. 104–110. Available at https:// doi: 10.1016/j.nedt.2016.02.003.
- Qiu, L., Sun, N., Shi, X., Zhao, Y., Feng L., Gong Y., et al. (2020): Fear of childbirth in nulliparous women: A cross-sectional multicenter study in China. Women and Birth. Vol. (33), No. (2) Pp. 136–41. https://doi.org/10.1016/j. wombi.2019.04.005 PMID: 31080099.
- Qiu, K., Jing, M., Sun, R., Yang, J., Liu, X., He, Z., Yin, S., Lan, Y., Cheng, S., Gao, F., Liang, F., & Zeng, F. (2016): The status of quality control in acupuncture-neuroimaging studies. Evidence-Based Complementary and Alternative Medicine, Vol. (2016), No. (36857851), Pp. 1–14. Available at https://doi.org/10.1155/2016/3685785.
- Van der Riet, P., Francis, L., & Rees, A. (2020): Exploring the impacts of mindfulness and yoga upon childbirth outcomes and maternal health: an integrative review, Scand. J. Caring Sci. Vol. (34), No. (3), Pp. 552–565. Available at https://doi.org/10.1111/scs.12762.
- Schweizer, M., Braun B., & Milstone A. (2016): Research Methods in Healthcare Epidemiology and Antimicrobial Stewardship – Quasi-Experimental Designs. Infect Control Hosp Epidemiol, Vol. (37), No. (10), Pp. 1135-40. doi: 10.1017/ice.2016.117.
- Stoll, K., Swift, E., Fairbrother, N., Nethery, E., & Janssen P. (2018): A systematic review of nonpharmacological prenatal interventions for pregnancy-specific anxiety and fear of childbirth, Birth (Berkeley, California) Vol. (45), No. (1), Pp. 7–18. https://doi.org/10.1111/birt.12316.
- Wolpe, J. (1990): The practice of behavior therapy. New York: Pergamon Press. (4th ed.) APA Psyc Info book, Pp. 1-421.
- Xanthou, A. (2020): The Effectiveness of 'EFT -Emotional Freedom Techniques' in People with Phobias, health in Clinical Neuroscience & Mental Health Dialogues in Clinical, Vol. (3), No. (1), Pp. 5-33. https://doi.org/10.26386/obrela.v3i1.173.
- Yuniarsih, S. (2018): Penggunaan SEFT (Spiritual Emotional Freedom Technique) untuk membantu Ibu hamil menurunkan kecemasan menghadapi Persalinan. In: Proceeding of the 7th University Research Colloquium, Pp.262–270.
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