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Original Article

Effectiveness of an Educational Program on Enhance Fear of Childbirth among Pregnant Women in Mosul City

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Abstract:

Background: Fear of childbirth is a common concern among pregnant women, potentially affecting their mental and physical well-being as well as their birthing experience. This study aims to identify the effect of educational program on enhancing fear from childbirth in Mosul city.

Methodology: using a quasi-experimental study design, was conducted primary health care centers in Mosul city for the period from 15th October 2024 to 15th January 2025.the study sample consist of 83 pregnant women were choosing purposively. The tool was used for data collection consisting of three parts: pregnant women socio-demographic characteristics, pregnant women knowledge about fear of childbirth, self-efficacy related to childbirth. The intervention for the study group involved a lecture about fear of childbirth. The data were analyzed by using SPSS, version26 using descriptive statistics and inferential statistics.

Results: The study showed no significant baseline differences in fear-related variables between the study and control groups in pre- test ($p > 0.05$), indicating initial group equivalence. Post-intervention (Post1 and Post2), the study group exhibited significantly reduced fear scores across all domains ($p < 0.01$), The educational program demonstrated moderate to good effect sizes across all fear subscales, with the highest impact seen in reducing fear of pain (E.S = 0.64) and fear of body damage (E.S = 0.62).

Conclusion: The educational intervention significantly reduced childbirth-related fears and enhanced self-efficacy among pregnant women. These findings support the value of prenatal education in promoting maternal psychological well-being and birth preparedness.

Key words: Pregnant women, Educational program, Fear of childbirth, Self efficacy.

Introduction:

Fear of childbirth can be classified as either primary or secondary anxiety disorders or particular phobias (tokophobia). While it is referred to be a secondary phobia if it develops after childbirth, it is a main phobia in women who have not yet given birth. (Kuljanac et al., 2023)

Kuljanac and associates, 2023 A common issue among nulliparous, primiparous, and multiparous women is fear of childbirth, which can have negative effects on their health as well as their labor, delivery, and postpartum conditions. (Vakilian et al., 2019)

Women's experiences giving birth and the results of their deliveries might be negatively impacted by fear of childbirth. Prevalence rates for FOC vary widely over the world, ranging from 1.9 to 30%, according to research. This could be the result of actual cultural differences or a reflection of the term FOC's ambiguous definition. (Alizadeh-Dibazari et al.) The diversity and adequacy of measurement tools (Slade et al., 2020). The feelings of fear during labor might range from common concerns to tokophobia, a pathological disorder. Tokophobia, or a pathological fear of giving birth, is a clinical disease that arises when a fear of birth goes beyond normal concerns. There are three types of tokophobia: primary, secondary, and tokophobia as a sign of underlying or pre-existing depression. Tokophobia is characterized as a variety of severe concerns related to birth and pregnancy. (Kaya, 2024)

A woman's pregnancy is a significant life event that is associated with two opposing emotions: happiness and anxiety. Pregnant women experience biological, social, and psychological changes that give rise to these two normal emotions. (Vakilian et al., 2023) The process of childbirth is natural. It is regarded as a pivotal moment in a woman's life. Both mother and kid may experience problems and a higher chance of dying as a result of this unexpected process. It also has an impact on a woman's emotions and thinking. These emotions range from joy and self-assurance to anxiety and terror. (Kananikandeh et al., 2022).

A variety of indicators, including negative sentiments about childbirth, fear of pain, fear of medical procedures, fear of losing one's independence, fear of staff misconduct, fear of maternal and infant death, fear of injury, fear of body change, and fear of unemployment and poverty, are all included in the complex variable of fear of childbirth. (Sanjari et al., 2022). FOC has many negative effects on women's physical and mental health, including pregnancy complications, severe pain and the use of anesthesia during childbirth, prolonged childbirth, mother-child relationship difficulties, postpartum depression and posttraumatic stress disorder (Hou et al., 2022). Increased labor pain, extended labor, low self-efficacy, and an unpleasant labor experience are all linked to dread of natural childbirth, and these factors can have a negative impact on the postpartum period, including postpartum depression.

(Vakilian et al., 2023) The increase in caesarean births by maternal request necessitates a critical examination of the underlying reasons driving women to make this choice. Several factors contribute to this trend, including fear of childbirth (tokophobia), perceived lower risk for the baby and mother, convenience in scheduling, and previous negative experiences with vaginal birth. The majority of studies investigated women's potential perceptions of fear during pregnancy and birth, including fear of childbirth the effects of negative experiences on fear of childbirth or the relationship between parity and fear of childbirth. (Kaya, 2024)

Parents can learn coping mechanisms for pregnancy, childbirth, and parenthood through antenatal education. The beneficial impact of prenatal education on maternal outcomes and childbirth is not well-established.(Alizadeh-Dibazari et al., 2023) Knowledge is considered the main determinant that influences health outcomes and the first line for adopting a healthy attitude. (El-Shrqawy et al., 2024) the study aims to identify the effectives of educational program on enhancing fear of childbirth among pregnant women in Mosul city.

Materials and Methods:

A quasi-experimental research design was used to implement educational program on pregnant women who selected by purposive sampling methods to select (76) women's and divided in two groups (38) experimental group, and (38) control group. The research was conducted in Al-

Zahra primary health care center, Al-Qadisiyah primary health care center, Cairo primary health care center, Al-Zanjili primary health care center, and Al-Hadba primary health care center in Mosul city/ Iraq for the period from 15th October 2024 to 15th January 2025. A developed questionnaire was used for data collection, it consists of three parts, the first one to assess demographic data for pregnant women, second part consist of six subscale (five Likert scale) to assess fear of childbirth includes (4 items) fear of pain, (7 items) fear of medical intervention, (3 items) fear of embarrassment, (2 items) fear of harming the child, (3 items) fear of not getting enough pain relief, and (12 items) fear of the body being affected by childbirth and the third parts consists of (6 items) to assess women self-efficacy.

Ethical Considerations: The study had been approved by the Ethics Committee of the College of Nursing/University of Mosul. gave the researchers formal permission to carry out the study. Before data collection, all pregnant women gave their form of consent. The data were analyzed by SPSS 26.

Results:

Table (1) Socio-demographical characteristics between the study and control groups.

Test of Homogeneity						
Variable	Items	Group			Test type	P-value
			No.	%		
Age	15-20	Control	11	29	Fisher's exact test	1.000
		Study	11	29		
	21-25	Control	8	21		0.435
		Study	12	32		
	26-30	Control	10	26		0.583
		Study	7	18		
	35-31	Control	9	24		1.000
		Study	8	21		
	36 or more	Control	4	11		0.358
		Study	1	3		
AGE AT M	20 years or less	Control	18	47	Fisher's exact test	0.491
		Study	22	58		
	More than 20 years	Control	20	50		0.646
		Study	16	42		
Educational level	Illiterate	Control	6	16	Fisher's exact test	1.000
		Study	5	13		
	Primary school	Control	17	44		0.167
		Study	24	63		
	Secondary school	Control	11	29		0.158
		Study	5	13		
	College degree	Control	4	11		1.000
		Study	4	11		
Occupation	Employed	Control	8	21	Fisher's exact test	0.086
		Study	2	5		
	Housewives	Control	30	79		0.086
		Study	36	95		
Number of	First pregnancy	Control	10	26	Fisher's exact	0.226

pregnancies		Study	16	42	test	
	2nd -3rd pregnancy	Control	18	48		0.818
		Study	16	42		
	4th or more	Control	10	26		0.037
		Study	6	16		
Previous labor experience	Vaginal Birth	Control	18	47	Fisher's exact test	1.000
		Study	17	45		
	Cesarean Birth	Control	6	16		0.480
		Study	3	8		
	No previous birth Experience	Control	9	24		0.142
		Study	16	42		
	Combined vaginal and cesarean birth	Control	5	13		0.430
		Study	2	5		
gestational age	First trimester	Control	4	11	Fisher's exact test	0.137
		Study	10	26		
	Second trimester	Control	15	39		0.817
		Study	17	45		
	Third trimester	Control	19	50		0.100
		Study	11	29		
expected birth date	Vaginal Birth	Control	22	58	Fisher's exact test	0.338
		Study	27	71		
	Cesarean Birth	Control	16	42		0.338
		Study	11	29		

Table (2): Analyses to compare the differences between two independent samples, Study group and the control group in each case of (Pre), (Post1), and (Post2).

Axis	Cases	Mean	T	P-value	Ass	Cases	Mean	T	P-value	Ass	Cases	Mean	T	P-value	Ass
Fear of pain	Pre – Study	3.425	0.508	0.613	N. S	Post1-Study	4.144	7.039	0.000	H. S	Post2-Study	4.003	5.464	0.000	H. S
	Pre-Control	3.359				Post1-Control	3.355				Post2-Control	3.348			
Fear of medical intervention	Pre – Study	3.125	0.680	0.499	N. S	Post1-Study	3.807	4.473	0.000	H. S	Post2-Study	3.677	3.276	0.002	H. S
	Pre-Control	3.233				Post1-Control	3.229				Post2-Control	3.233			
Fear of Embarrassment	Pre – Study	3.250	0.256	0.799	N. S	Post1-Study	3.900	5.147	0.000	H. S	Post2-Study	3.722	3.406	0.001	H. S
	Pre-Control	3.288				Post1-Control	3.261				Post2-Control	3.277			
Fear of harm to baby	Pre – Study	3.209	0.320	0.750	N. S	Post1-Study	4.023	6.101	0.000	H. S	Post2-Study	3.885	5.092	0.000	H. S
	Pre-Control	3.147				Post1-Control	3.147				Post2-Control	3.133			
Fear of not getting enough	Pre – Study	3.257	0.540	0.591	N. S	Post1-Study	3.923	3.746	0.000	H. S	Post2-Study	3.780	3.142	0.003	H. S

pain relief	Pre-Control	3.122				Post1-Control	3.219				Post2-Control	3.185			
Fear of body damage	Pre – Study	3.424	0.093	0.926	N. S	Post1-Study	3.866	4.689	0.000	H. S	Post2-Study	3.768	3.691	0.000	H. S
	Pre-Control	3.435				Post1-Control	3.437				Post2-Control	3.429			

H.S (High Significant), N.S(Non-Significant)

Table (3): Effect size of educational program on Study group.

Subscale	E.S (Effect Size)	Decision
Fear of pain	0.64	Good agreement
Fear of medical intervention	0.58	Good agreement
Fear of Embarrassment	0.36	Moderate agreement
Fear of harm to baby	0.37	Moderate agreement
Fear of not getting enough pain relief	0.40	Moderate agreement
Fear of body damage	0.62	Good agreement
Self-efficacy	0.53	Good agreement

Discussion:

The study revealed presents a test of homogeneity using Fisher's exact test to compare sociodemographic and obstetric variables between control and study groups. Most p-values exceed 0.05, suggesting no statistically significant differences between groups, except for the "4th or more" pregnancies category ($p = 0.037$), indicating higher parity may be more prevalent in one group. The lack of significant variation strengthens group comparability, enhancing internal validity (Kim et al., 2020). Homogeneity across education, age, and gestational variables aligns with similar findings in maternal health research (WHO, 2022). This supports that observed outcomes are likely due to interventions, not baseline differences. The study showed no significant baseline differences in fear-related variables between the study and control groups in pre- test ($p > 0.05$), indicating initial group equivalence. Post-intervention (Post1 and Post2), the study group exhibited significantly reduced fear scores across all domains ($p < 0.01$), suggesting the intervention's strong psychological impact. These results align with recent findings emphasizing the effectiveness of prenatal education and cognitive-behavioral interventions in reducing childbirth-related fears (Pillai & Smith, 2021). Addressing fears like pain, harm to the baby, and embarrassment is crucial for positive birth experiences (D'Souza et al., 2023). The sustained effect at Post2 highlights the intervention's potential for long-term maternal mental health support.

The educational program demonstrated moderate to good effect sizes across all fear subscales, with the highest impact seen in reducing fear of pain (E.S = 0.64) and fear of body damage (E.S = 0.62). These findings suggest the intervention effectively enhanced participants' childbirth confidence and reduced anxiety. Notably, self-efficacy also improved (E.S = 0.53), reinforcing the value of targeted education in empowering expectant mothers (Fenwick et al., 2021). Moderate effect sizes in emotional fears such as embarrassment or harm to the baby reflect areas

needing further psychological support. Overall, the program aligns with evidence advocating for antenatal education to improve maternal outcomes (Slade et al., 2022).

Conclusion:

The educational intervention significantly reduced childbirth-related fears and enhanced self-efficacy among pregnant women. These findings support the value of prenatal education in promoting maternal psychological well-being and birth preparedness.

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