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### Training on Childbirth Preparation on the Self-Efficacy and Psychological State of Pregnant Women in Kakamega County

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*Self-Efficacy,  
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Childbirth,  
Pregnant Women.*

Pregnant women's ability to cope with childbirth pain is a significant indicator of self-efficacy during labour. The link between antenatal childbirth knowledge and self-efficacy is largely unknown. This study assessed the impact of training in childbirth preparation on women's self-efficacy and their psychological status during childbirth in Western Kenya. We used a quasi-pre-test post-test CBS EI design to assess training intervention pinned on self-efficacy theory. Participants were assigned either to the control group or the intervention group at the antenatal care clinic. A pre-test on self-efficacy was performed using the childbirth self-efficacy inventory scale (CBSEI-16). The intervention group received two sessions of 2 hours each of the training between the 3<sup>rd</sup>–and 33<sup>rd</sup> weeks of gestation. Evaluation of outcome measures was conducted at the end of the 36<sup>th</sup> week of gestation and within 48 hours after delivery for childbirth self-efficacy and fear and anxiety, respectively. Childbirth self-efficacy was determined by the CBSEI-16, while fear and anxiety were determined using a five-point Likert scale. Statistical significance was determined by independent t-tests. Mothers in the intervention group had higher post-test scores for Outcome Expectancy (OE) and Efficacy Expectancy (EE),  $P < 0.001$ . Mothers in the intervention group were more likely to be in control and felt more capable with less fear and anxiety than in the control group  $P < 0.001$ . Data presented here suggest that training in childbirth preparation improved self-efficacy and decreased anxiety and fear.

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**INTRODUCTION**

Childbirth is a critical yet difficult life event, affecting the majority of women annually <sup>1</sup>. It is often a stressful event that creates fear, anxiety, and uncertainty for many women around the world. Several studies have shown that the pain of labour and childbirth is one of the most severe and distressing events in a woman's life<sup>2</sup>. Addressing the pain, fear, and anxiety associated with childbirth is an important concern not only for women of childbearing age but also for childbirth health professionals. However, in most medical facilities, the fear, anxiety, and pain aspects of childbirth are largely unexplored.

Evidence from previous studies in Kenyan government hospitals shows that the majority of women experience labour that is longer and more painful than expected. In addition, most women do not receive childbirth education during the usual antenatal period <sup>3,4</sup>. Antenatal care (ANC), which is attended by most women and precedes childbirth, is assumed to be relevant in addressing pain coping strategies, fear, and anxiety during labour. However, current studies have revealed that ANC is inadequate in addressing the above concerns about childbirth. Most women who attended ANC were still uncertain about many aspects of labour <sup>5</sup>. Women alluded that healthcare providers spent little time with them without practising any of the methods of pain relief, and consequently, they were not in control during labour. This implies that mothers are not well prepared for the process of labour due to ineffective information that is currently being conveyed during antenatal care services. Indeed, the majority of women are anxious about labour pain and how they can be eased of this pain <sup>6</sup>.

To address the aforementioned challenges, it is imperative that mothers are adequately trained for

the childbirth process. Mothers who have been inadequately prepared physically, emotionally and psychologically for the birth process often fail to adapt to their new role as a mother <sup>7</sup>. In addition, women who anticipate pain with intense worry, panic and depression often experience prolonged labour <sup>8</sup>, which potentially leads to poor maternal and neonatal health outcomes. As such, there is a need to properly manage the labour pain during the childbearing process to enhance good maternal as well as neonatal health outcomes. One promising approach to managing the childbearing process pain is by taking pregnant women through a targeted training program aimed at pain management hence improving women's self-efficacy during childbirth.

There is a plethora of literature suggesting that women want to continue being in charge during childbirth <sup>5</sup>. Currently, childbirth self-efficacy is known as an important process of women's reliance on their ability to manage childbirth. Additionally, childbirth self-efficacy has a significant impact on the woman's overall experience with childbirth by allowing coping behaviours and resilience to cope with any uncertainties associated with birth <sup>9</sup>. A recent study in Indonesia examining the association between self-efficacy and birth complications revealed that mothers who had poor self-control and low self-efficacy had more risks of developing childbirth complications relative to those who had high self-efficacy. Moreover, the findings of the study suggest that antenatal health care providers should prepare mothers from pregnancy to childbirth to enable them to have high efficacy during childbirth <sup>10</sup>.

In addition, previous investigations from Turkey to identify factors relating to childbirth self-efficacy among expectant women demonstrated

that income status, individual experiences like foetal loss, prenatal education and women’s perceived efficacy had an effect on childbirth self-efficacy <sup>11</sup>. Other studies in Singapore have also revealed a significant association between ethnicity, parity, previous birth mode, fear of childbirth, psychological well-being and childbirth self-efficacy <sup>9</sup>. Moreover, perceived spousal support was also identified as a factor that affected birth self-efficacy positively, and it was recommended that midwives should support this idea during pregnancy and childbirth<sup>12</sup>.

A structured antenatal education in Saudi Arabia was important in providing high-quality information and competencies that enhanced maternal self-efficacy during childbirth <sup>13</sup>. Similarly, in Turkey, a 6-week antenatal education impacted positively on childbirth attitude, maternal role adjustment and improved level of self-confidence among women <sup>7</sup>. Furthermore, spiritual counselling has been proven to be effective in enhancing childbirth self-efficacy as a nonpharmacological method <sup>14</sup>.

A study on psychological, educational and complementary measures to reduce fear of childbirth among pregnant women affirmed that antenatal education, psychoeducation, social support and counselling were effective in reducing fear of childbirth<sup>15</sup>. Antenatal preparation courses and psychotherapy were

fronted as important requirements to empower expectant mothers to prevent fear of childbirth <sup>16</sup>. There is also an association between fear of birth and depressive symptoms <sup>17</sup>. Fear of childbirth has also been linked to negative childbirth experiences and increased caesarean births<sup>18</sup>. Support strategies, therefore, are required to prevent fear and consequently improve the childbirth experience.

**MATERIALS AND METHODS**

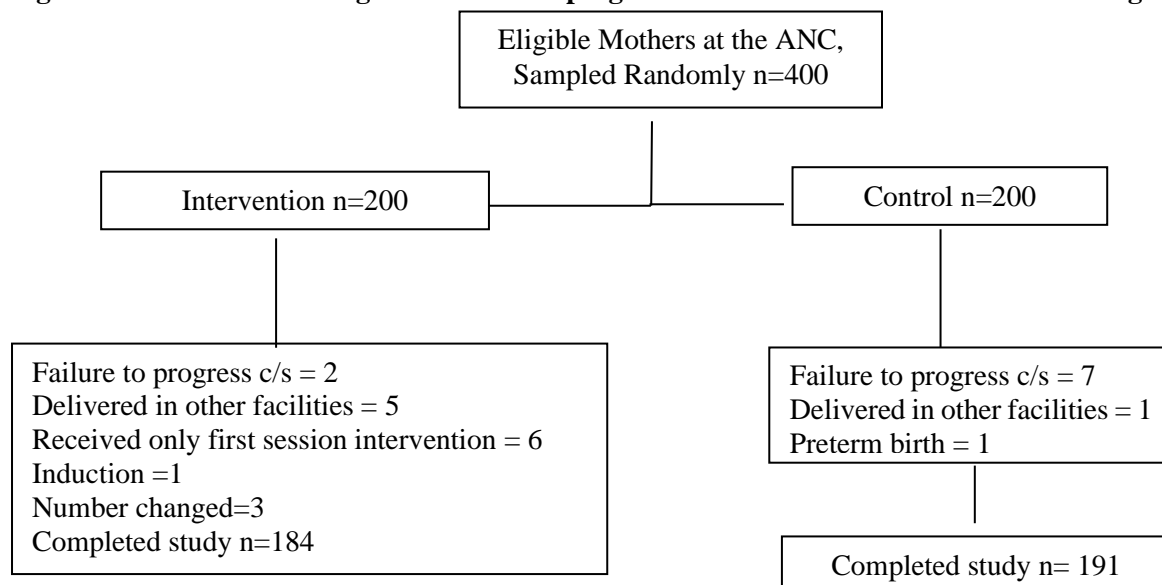
**Study Area**

These investigations were performed in Kakamega County. Previous estimates show that the county had approximately 67,127 deliveries between January and December 2021. majority of which were through spontaneous vaginal delivery (SVD). Study participants were enrolled at Kakamega County Referral Hospital (KCRH), a level 5 facility, Butere, Malava, Iguhu, Makunga and Lumakanda level 4 health facilities, located in Butere, Malava, Ikolomani, Mumias West and Lugari sub-counties, respectively.

**Study Design**

A quasi-trial pre- and post-trial study design was used. Pregnant women who met the inclusion criteria were enrolled on the study from the antenatal care clinics of the respective hospitals and followed up within 48 hours of birth.

**Figure 1: Flowchart showing recruitment of pregnant women to intervention and control groups**



### Study Population

Pregnant women attending antenatal care services at KCRH, Butere, Malava, Iguhu, Makunga and Lumakanda in Kakamega County, Kenya, comprised the study population.

### Inclusion Criteria

The primary inclusion criterion was that participants were at low risk of pregnancy. The study targeted women with normal pregnancies without complications. Women who had birth plans to deliver in the facility where they had antenatal care because they were to be monitored. Aged 18 years or older, single pregnancies, gestational age between 28<sup>th</sup> and 32<sup>nd</sup> weeks because the intervention was performed in the third trimester and targeted at women about to go into labour. Women whose recommended mode of delivery was a spontaneous vaginal delivery.

### Exclusion Criteria

Exclusion criteria entailed failure to consent to participate in the study. Pregnancy complications and caesarean section, adverse birth outcomes such as premature birth, congenital birth defects or stillbirth were also excluded from the study due to the emotional stress they were undergoing.

### Sample Size Determination

The sample size was calculated according to the formula by Fischer et al. (1998). The hospital delivery utilisation rate in Kakamega County was 70%. So,  $p=0.70$ . A total of 400 was obtained with an additional 20% of samples to resolve attrition rates.

The sample size was determined as follows.

$$n = \frac{z^2pq}{e^2}$$

Where  $n$  = Desired sample size;  $z=1.96$  (standard normal deviation);  $p$  = known character of the study population. The utilisation of hospital deliveries in Kakamega County is 70 % (KCHR, 2021);  $p=0.70$ ;  $q$ = contact usually set at 1- $p$  (0.30)  $d$ =degree of accuracy will be set at 0.05

$$1.962 \times 0.7 \times 0.3 = 323.$$

Hence, the sample size was 323. Twenty percent (20%) of the sample will be added to cater for the attrition rate.

20% of 323 are 65, so the sample size was 398, approximated at 400

### Sampling Technique

The KCTRH was deliberately chosen to be the only referral hospital serving the Western region of Kenya. After listing the 11 level 4 medical facilities, a simple random sampling strategy was employed to select five tier-4 health facilities. The selected tier 4 medical facilities were Butere, Malava, Iguhu, Makunga and Lumakanda. The number of participants in each facility was proportionally distributed based on that facility's birth statistics. The KCTRH 70, Butere 70, Malava 66, Iguhu 66, Lumakanda 64 and Makunga 64. The antenatal care register was examined for information pertaining to maternal demographic, socio-economic status, and gestational age. Therefore, it was used to select eligible mothers and assign numbers to them by week of attendance. Enrolment of cases and controls was conducted in alternate weeks until the desired sample size was achieved in each facility. We placed half of the mothers in the intervention group and the other half in the control group. Each week, a specific number of mothers were recruited using a simple randomisation technique. Cases and controls were separated by week to minimise contamination impact.

After screening, participants were contacted via a registered phone number and face-to-face contact was scheduled to inform the purpose of the study and conduct screening in accordance with the inclusion criteria. Replacements were made from the register for those who did not meet the eligibility criteria or who were not available by phone. Participants were grouped in numbers between 10 and 15 for easier follow-up based on the length of their pregnancy. The intervention group received two sessions of approximately 2 hours each of the educational intervention program between the 31<sup>st</sup> and 33<sup>rd</sup> weeks of pregnancy. All participants were monitored, and

outcome measures were recorded at the end of the 36<sup>th</sup> week of pregnancy for childbirth efficacy and within 48 hours of birth for fear and anxiety.

### **Pretesting and Training of Research Assistants**

Overall, 12 research assistants, that is, 2 per facility, were recruited to assist with data collection for the study. The study tools were pre-tested at the nearby Vihiga County Hospital with 15 participants in the hospital's prenatal and perinatal care units. The goal was to identify any anomalies in the tools and also to estimate the time required for each respondent. The reliability of the instruments was assured because they have been successfully used in China and Saudi Arabia and have proven to be reliable<sup>13,19</sup>.

### ***The Intervention***

The childbirth preparedness training intervention programme is envisaged to increase self-efficacy among pregnant women. We anticipated that they would successfully accomplish coping strategies for stress and pain during childbirth. The training was structured in two sessions of 2 hours, which were interactive. We utilised both weekdays and weekends to accommodate career participants during the weekends. We designed each session in groups of 10-15 mothers for efficient interactions and discussions. We employed performance accomplishments, vicarious experience and verbal persuasion in training based on the self-efficacy theory by Bandura<sup>20</sup>.

The first day of training had two activities. The first activity aimed at increasing knowledge and motivating participants. This activity was achieved by increasing knowledge and inspiring participants to diligently participate in this birth preparation process. Participants in prenatal education understand that childbirth is a normal, natural, and healthy process and are prepared to approach it with confidence. Information content included psychophysiological phenomena at birth (labour pain, labour pain causes, actual signs of labour, stages of labour, procedures to be performed during labour). This was delivered using PowerPoint presentations, charts, and images. The second activity on the first day of

training focussed on coping strategies and their demonstrations. To this end, methods of coping with pain in childbirth and their relationship to self-efficacy during childbirth were taught. A variety of coping behaviours were taught, including deep breathing and relaxation techniques, distraction, pain perception restructuring, walking, massage, and prayer to help participants take control and reduce emotional stress and pain in labour. A demonstration of the above-mentioned coping behaviours was performed. Pregnant women were encouraged to practice learned coping strategies using recall aids such as notes, photographs, and pneumonia.

The second day of training had four activities. The first activity was a return demonstration, where the participants were expected to perform the coping approaches and demonstrate the previously learnt coping strategies. The second activity on this day entailed vicarious learning. This involved participant learning by means of role models by use of video clips. Thereafter, two participants were asked to demonstrate the methods of coping with pain during the labour process. The third activity for day 2 focussed on mastering coping competencies. As such, participants used verbal contrasts to practice learned coping strategies with the use of recall aids at home and after teaching sessions, i.e., photography and mnemonic. Brochures summarising key coping strategies for directing individual rehearsals was distributed. A practice diary to record daily as a means of self-assessing their positive outcomes after practice in the belief that skill acquired through curated practice was encouraged. The last activity for the second day was aimed at verbal persuasion.

The pregnant mothers were motivated and evaluated for their consistency in practising the learned skills. We also had group discussions touching on the critical elements during childbirth, experience sharing on the expectations during the labour process, including pain, common procedures: vaginal examination (VE), and nutrition. The participants were evaluated

based on study objectives at 36 weeks gestation for self-efficacy and within 48 hours after delivery for fear and anxiety. On the other hand, the control group received standard antenatal care, which did not include training on childbirth preparedness. Comparisons to determine the impact of the training intervention program were made between the two groups.

### Data Collection Procedure and Tools

This data was collected between December 2022 and April 2023. This study utilised structured questionnaires, the Childbirth Self-Efficacy Inventory (CBSEI-16) scale and a five-point Likert scale. The structured questionnaires were used to collect data on the socio-demographic characteristics of the participants. The CBSEI-16 scale was utilised to evaluate the childbirth self-efficacy scores before and after the intervention among the two groups of women. It has two items: the Outcome Expectancy scale (OE) and the Efficacy Expectancy scale (EE) {Bandura, 1977 #25}. For the OE Part, expectant mothers were to imagine how labour will be and feel having strong and frequent contractions and during pushing of the baby, and how each of the behaviours indicated would help with coping with the whole labour process. On a scale of 0-10, mothers were to point and indicate between 1 not helpful at all and 10 very helpful. On the other hand, for the EE scores, mothers were required to imagine being in labour with strong and frequent contractions and, during the pushing of the baby, to indicate how sure or certain they were of their capability to use the behaviour to help them cope with the entire process of labour by circling a number between 1, not at all sure, and 10, completely sure or certain. The total number of items to respond to were 16, with the total score being 160 highest and 16 lowest. Childbirth self-efficacy was determined by summing up both OE and EE scores. A high efficacy was a total score of 80 and above, while a low efficacy was a total score of below 80. The OE and EE scores had each a highest score of 80. The OE and EE scores were collected before the intervention and at 36 weeks, just before mothers went into labour, and compared between the

intervention and control groups. A five-point Likert scale (0-5) was used to assess the capability, control, fear, and anxiety among mothers.

### Data Management and Analysis

Collected data was cleaned, coded, and entered an Excel spreadsheet, after which it was transferred into SPSS version 26. The means of the childbirth self-efficacy scores OE and EE, both pre- and post-scores in the two groups, were compared, and a t-test was performed for statistical significance. The mean scores for the two groups on the various aspects of the Likert scale were obtained and tested for significance by the t-test.

### Ethical Considerations

Permission to undertake the study was sought from the Institutional Ethics and Research Committee (IERC) of Masinde Muliro University of Science and Technology, National Commission for Science and Technology (NACOSTI), County Government of Kakamega and permission from specific level 4 health facilities from the county. Study participants were briefed about the objectives of the study and gave informed consent. Participation was on a voluntary basis, and any decline did not affect their care. The future benefits of the study were communicated to the participants. Anonymity, privacy, and confidentiality were adhered to. The data collected was kept under lock and key for safe custody.

## RESULTS

### Social Demographic Characteristics of the Study Participants

*Table 1* presents the socio-demographic characteristics of the study participants. Three hundred and seventy-five mothers participated in the study (375), the median age was 24 years, the majority were married (73.1%), Christians (93.9%), those who attained secondary education (45.3%), not employed (56.6%), attended more than four antenatal visits (79.2%), multipara (52.2%) and had planned pregnancies (56.8%). There was no statistical difference between the

intervention group and the control group, suggesting homogeneity in the groups.

**Table 1: Socio-demographic characteristics of the study participants**

Parameter	Study Groups		P value	
	No intervention	Intervention		
Age Median (IQR)	24.00 (8)	25.00 (9)	0.113 <sup>a</sup>	
Marital status	Single: n (%)	54(28.3)	44(23.9)	0.143 <sup>b</sup>
	Married: n (%)	137(71.7)	137(74.5)	
	Separated: n (%)	0 (0)	3(1.6)	
	Divorced: n (%)	0(0)	0(0)	
	Widowed: n (%)	0(0)	0(0)	
Religion	Christian; n (%)	176 (92.1)	176 (95.7)	0.151 <sup>b</sup>
	Muslin; n (%)	15 (7.9)	7 (3.5)	
	Hindu; n (%)	0 (0)	1 (0.5)	
	Others; n (%)	0 (0)	0 (0)	
Education level	None; n (%)	0(0)	4 (2.2)	0.100 <sup>b</sup>
	Primary; n (%)	58(30.4)	52 (28.2)	
	Secondary; n (%)	92 (48.2)	78 (42.4)	
	Tertiary; n (%)	41 (21.5)	50 (27.2)	
Employment status	Student; n (%)	29 (15.2)	23 (12.5)	0.628 <sup>b</sup>
	Not employed; n (%)	107 (56)	105 (57.1)	
	Casual; n (%)	14 (7.3)	10 (5.4)	
	Permanent; n (%)	4 (2.1)	8 (4.3)	
	Self-employed; n (%)	37 (19.4)	38 (20.7)	
No. of ANC visits	Less than 4; n (%)	39 (20.4)	39(21.2)	0.853 <sup>b</sup>
	Four and above; n (%)	152(79.6)	145 (78.8)	
Parity	Primi-para; n (%)	75 (39.3)	73 (39.7)	0.995 <sup>b</sup>
	Multi-para; n (%)	100 (52.4)	96 (52.2)	
	Grand multi-para; n (%)	16 (8.4)	15 (8.2)	
Pregnancy planning	Planned; n (%)	104 (54.5)	109(59.2%)	0.349 <sup>b</sup>
	Not planned; n (%)	87 (45.5)	75 (40.8%)	

Data presented as n (%) unless otherwise stated. <sup>a</sup>Statistical difference determined by Mann-Whitney tests; <sup>b</sup>Statistical significance determined by Pearson Chi-Square tests.

### Effects of a Training Intervention Program on Childbirth Self-Efficacy

The Childbirth Self-Efficacy Inventory (CBSEI-16) scale was used to determine self-efficacy among pregnant women both in the intervention and the control group. Table 2 shows the means of the two groups as compiled using the CBSEI-16 scale. The pre-test (before birth) results indicate that the OE mean in the control group was [mean±std err. (25.47±0.470)], and in the intervention group (25.27±0.492),  $P=0.769$ , were comparable. Similarly, the pre-test EE mean in the control group (21.21±0.399) and the intervention group (21.16±0.407),  $P=0.935$ , were also comparable. A training intervention program was offered to the intervention group. All mothers

were followed up, and a post-test (after birth) was given at the end of the 36<sup>th</sup> week of gestation. The results of the post-test OE score control (38.66±0.693) were lower than post-test OE scores in the intervention groups (68.88±0.456),  $P<0.001$ . However, post-test EE scores for control (32.24±0.498) were more than two-fold lower than those of post-test EE scores for Intervention (74.92±0.255),  $P<0.001$ . These results suggest that before the intervention, women in both control and intervention had the same level of childbirth efficacy as indicated by the pre-test OE and EE results. However, after the intervention, the women in the intervention had higher childbirth efficacy levels, as shown by higher OE and EE scores in the post-test relative to the control group.

**Table 2: Effects of education intervention on childbirth self-efficacy among pregnant women.**

Parameter	No intervention	Intervention	P value
OE Score (Pre)	25.47 (0.470)	25.27 (0.492)	0.769
OE Score (Post)	38.66 (0.693)	68.88 (0.456)	<0.001
EE Score (Pre)	21.21 (0.399)	21.16 (0.407)	0.935
EE Score (Post)	32.24 (0.498)	74.92 (0.255)	<0.001

*Data presented as mean (std error of the mean). Statistical significance was determined by independent t-tests.*

### Effects of Training Intervention on the Psychological States of Pregnant Women

The psychological states of pregnant mothers were also evaluated with special emphasis on their response to anxiety and fear. *Table 3* below shows the mother's response to anxiety, fear, and other psychological factors. The results show that

mothers in the intervention group felt more in control during labour and were more capable to withstand pain, and their birth process progressed as was expected than those in the control group ( $P < 0.001$ , for all variables). In contrast, participants in the control group were more scared and anxious relative to those in the intervention group ( $P < 0.001$ , respectively).

**Table 3: Mothers response to anxiety and fear during labour**

Response	No intervention	Intervention	P value
Scared	3.64 (0.082)	2.38 (0.062)	<0.001
Anxious	3.85 (0.077)	2.52 (0.123)	<0.001
Being in control	2.98 (0.065)	3.94 (0.060)	<0.001
Capable to withstand pain	3.01 (0.070)	4.36 (0.049)	<0.001
Birth as expected	3.43 (0.083)	4.54 (0.057)	<0.001

*Data presented as mean (std error of the mean). Statistical significance was determined by independent t-tests.*

## DISCUSSION

The current study established that at the beginning of the study, childbirth self-efficacy in the two groups was comparable. There were no differences in the pre-test means in the OE and EE scores in the intervention and control groups. However, post-test comparison shows that mothers in the intervention group had high levels of childbirth self-efficacy compared to those in the control group. This is attributed to the fact that those in the intervention group were taught various coping skills and had a chance to practise these methods. Therefore, they were empowered to use these methods during the process of labour. Enhanced knowledge offered concerning childbirth processes, procedures and expectations could have also boosted their confidence. Contrary, those in the control who went through normal standard care may not have been educated more on coping strategies and were incapable of applying any of those methods during childbirth. Similar observations have been made in Saudi Arabia, where a structured antenatal education

was important in providing high-quality information and competencies that enhanced maternal self-efficacy during childbirth<sup>13</sup>. This previous study had fewer participants, 94, compared to 375 in the current study. The current study also included multi-paras, but the former study was only conducted in primi-paras. The CBSEI scores in the former study may be of higher value since they utilised a longer version compared to the shorter version utilised in the present study. Additionally, in Turkey, a 6-week antenatal education impacted positively on childbirth attitude, maternal role adjustment and improved level of self-confidence among women<sup>7</sup>.

Currently, improved technology and use of social media platforms in Jordan, Middle East, to enhance the effectiveness of childbirth education showed that those who were enrolled in the program had improved coping abilities during birth relative to those who were in the control group<sup>21</sup>. In addition, spiritual counselling has been proven to be effective in enhancing



childbirth self-efficacy as a non-pharmacological method<sup>14</sup>. Moreover, perceived spousal support is also a critical factor that influences birth self-efficacy positively. For this reason, it is recommended that midwives should consider antenatal training programmes during pregnancy and childbirth<sup>12</sup>.

This study also established that mothers who were in the intervention group had less fear and anxiety compared to those in the control group. This is at least in part due to the fact that those in the intervention group were taught more about childbirth procedures, methods of coping with pain and what to anticipate during birth. The program also reassured mothers that childbirth was a normal procedure and they should approach it with confidence rather than fear. Any concerns that mothers had were also addressed, including increasing knowledge of the physiology of childbirth. This could have given the mothers in the intervention group assurance, and they developed more resilience towards childbirth. Those in the control did not have the opportunity to be trained on the process of childbirth and, as such, were not well equipped with coping strategies during birth. Therefore, as shown by our data, they were more uncertain, more fearful, and anxious. Similar findings were reported in Spain in a systemic review to investigate psychological, educational, and complementary measures to reduce the fear of childbirth among pregnant women. It was affirmed that antenatal education, psychoeducation, social support and counselling were effective in reducing fear of childbirth<sup>15</sup>. However, in the same study, cognitive behavioural therapy and some alternative measures needed more investigation as the evidence was not compelling. The current study employed cognitive restructuring of pain, where mothers were taught to perceive childbirth pain as useful pain since it assisted in cervical dilatation and descent of the baby. It was not destructive or pathological as most mothers thought, but its single effect was not assessed. The results of relaxation techniques were contradictory in the former study; the current study utilised relaxation techniques as well, but its single effect was not

analysed; therefore, individual impact may not have been recorded. Comparatively, a systemic review in Iran on the effect of interventions in relieving the fear of childbirth in pregnant women revealed that psychotherapy and education decreased the fear of childbirth. Emphasis on pregnancy training and Antenatal preparation courses as requirements to empower expectant women to prevent fear of childbirth has been proposed<sup>16</sup>.

In Taiwan, similar results have been recorded using an integrated childbirth education program where fear, anxiety, and depression were reduced<sup>22</sup>. However, contradictory results were recorded in Turkey, where fear of childbirth scores were not significantly different between the intervention group and the control group. This could be attributed to the fact that all participants were nulliparous and had a fear of the unknown despite others going through the antenatal classes that addressed the aspect of fear of childbirth.

## CONCLUSION

Collectively, the data presented herein suggests that the educational intervention program was effective in improving childbirth self-efficacy among pregnant mothers, as indicated by improved scores after training in the intervention group compared to the control group. In addition, women who went through the educational intervention program were less fearful, less anxious, and also felt more in control during labour and childbirth compared to those in the control group.

## Implication to Research and Practice.

The study recommends that an educational intervention program should be incorporated into antenatal care, specifically in the third trimester, to prepare mothers adequately for the diverse process of labour by increasing their knowledge and coping mechanisms for childbirth pain and improving their psychological status before labour.

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