Effect of Birth Preparation Coaching Sessions on Women's Self Efficacy for Coping with Labor Pains and Outcomes

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Abstract

Background: Women with childbirth experience as a significant life event that can affect them for the rest of their lives. Research from previous years supports the effectiveness of childbirth coaching sessions as one of the best ways to help women improve self-efficacy and cope with labour pain. **Aim**: Evaluate the effect of birth preparation coaching sessions on women's self efficacy for coping with labor pains and outcomes. **Design:** Quasi-experimental research design was used in this study. **Setting:** This study was carried out at antenatal care clinics in health care centers and the labor unit at Dar Sahet Elmar`Aa hospital that follow Egypt healthcare authority in Port Said city. **Sample:** 132 of primigravida women were randomly divided into two groups as part of a purposive sample. **Tools**: Four main tools were used: A Structured interviewing questionnaire, childbirth self-efficacy inventory, numerical rating scale, and childbirth outcomes sheet. **Results**: Showed that the mean scores for result outcome expectancy and self efficacy expectancy at the pretest did not significantly differ between the study and control groups. However during the posttest and throughout the follow-up phase, there were highly significant differences between the two groups (p=0.000). Additionally, the mean score of labour pain during the 1st and 2nd stage of labour decrease among the study group compared to control groups with highly significant differences (p = 0.001). Based on the method of delivery, intrapartum complications, and duration of labour, there were statistically significant differences between the studied groups (p=0.010, 0.015 and 0.005 respectively). Moreover, the studied groups differed statistically significantly in terms of apgar scores and ICU admissions (p= 0.002 & 0.012 respectively). Furthermore, both the studied groups showed positive correlations among total pain scores, self-efficacy scores, and labour outcomes. **Conclusion:** The study concluded that birthing coaching sessions improved study group members' self-efficacy in managing labour pain and labour outcomes when compared to control group members. **Recommendations:** To improve pregnant women's self efficacy, outpatient clinics should distribute brochures and posters about simple ways to deal with labour pain.

Key words: Birth Preparation, Coping strategies, labour pain, Outcomes of labour, Self- Efficacy.

Introduction

When resources are scarce, pregnancy and childbirth are seen as life-or-death situations. Additionally, labour is a significant event in a woman's life that has a variety of dimensions, including the physical, psychological, cultural, social, and emotional. Therefore, fear of childbirth is unavoidable for pregnant women as they set out on what they believe to be a life-defying journey to motherhood **(Bendtsen, 2023).**

A woman dies giving birth or during pregnancy every minute. Therefore, early and routine antenatal care by qualified medical professionals increases the likelihood that pregnant women and their families will receive psychological and counselling support, and increases the likelihood that the pregnancy will end in a safe delivery with the help of trained birth attendants; these advantages, in turn, reduce maternal and fetal deaths **(Magunda, 2023).**

According to findings from prior research, active psychosocial and cultural support for pregnant women who are seeking information about childbirth improves their physiological processes, feelings of hope, and positive emotions, which in turn leads to a positive pregnancy in terms of their confidence in and experiences with childbirth. Childbirth self-efficacy in this sense refers to a pregnant woman's expectations as well as beliefs around childbirth **(Campbell, 2019).** The specific skills that are expected of them during childbirth tend to be internalised, mastered, and carried out by women who have a high level of self-efficacy during pregnancy **(Munkhondya et al., 2020).**

Additionally, a woman's perception of her capacity for managing stressful situations and the application of necessary behaviours are implied by her childbirth self-efficacy. This mechanism is made up of two parts expected outcome and expected self-efficacy—both of which have a significant impact on how the woman manages the delivery process. The self efficacy expectation relates to the belief of women in the ability to succeed in a certain behaviour under his or her control of a given situation, as opposed to the expected outcome, which suggests the woman's belief that a particular behaviour leads to a particular outcome **(Timmermans et al., 2019).** According to Hoffmann, **Hilger & Banse (2023),** pregnant women with low perceived risk, lower incidence of postpartum depression, fewer caesarean sections (CS), and less labor discomfort were all connected with high levels of self-efficacy at birth.

Hassanzadeh et al. (2019) mentioned that childbirth coaching sessions are programmes that instruct pregnant women on how to use breathing, focus, and exercise techniques to use during labour, which in turn plays a crucial role in the mother's physical and psychosocial preparedness, reduce pain and improves labour outcomes **(Pinar et al., 2018).** Also, these supportive approaches taught in the birth preparation coaching sessions assist expectant mothers in achieving these goals at delivery by increasing their engagement in labour, which enhances labour efficiency **(Zare et al., 2021).**

Moreover, that programme can assist expectant mothers and their families in developing birth plans, making decisions throughout the course of the pregnancy and labour, changing delivery into an interesting experience for the women by enhancing the emotional and psychological factors of delivery, assisting in the selection of pain relief techniques, and preparing for breastfeeding. Childbirth sessions also teach women how to spot unanticipated problems including infection, postpartum haemorrhage, and gestational hypertension that may result in maternal fatalities **(Hassanzadeh et al., 2021).**

Researchers have researched a range of strategies, including educational initiatives, to advance the physical and mental health of women. It was found conventional methods to educating expectant mothers about childbirth did not significantly enhance their psychological wellbeing or labour outcomes. In order to make the best choices about the manner of delivery, develop the skills necessary for childbirth and pain management, and prepare for motherhood, women frequently require antenatal skills based childbirth education programmes (Howarth, 2018).

In order to increase the likelihood of a safe delivery with the help of trained birth attendants, nurses and midwives can play a significant role in preparing women through educational childbirth coaching sessions that decrease pregnant women's fear and anxiety and strengthens women choice and pain perception-related decision-making, self confidence in handling labour pains and improve labour outcomes as well (Hassanzadeh et al., 2021).

Significance of the study:

Among stressful life events, childbirth is distinctive in that it cannot stop once it starts. Women must make certain preparations before giving birth in order to get the desired results. These include calming down, controlling breathing patterns, and providing support with expulsion during a condition marked by varying but gradually greater uterine contractions, pelvic discomfort, and persistent pressure in the pelvis that may last for several hours (Awang Muda, Badrin & Badrin, 2023).

Women now choose caesarean sections due to labour discomfort anxiety and a lack of information about labour (Kazemi, Beigi & Najafabadi, 2023). Egypt's CS rate climbed from 28% in 2008 to 52% in 2014, according to the Ministry of Health and Population [MOHP] (2015). In 2014, the city of Port Said's CS rate was 77%. Additionally, because childbirth education programmes are not used in Egyptian healthcare systems, pregnant women requested CS without medical reasons (El-Nemer 2015). Therefore, evaluating the effect of birth preparation coaching sessions on women's self efficacy for coping with labor pains and outcomes is crucial.

Aim of Study:

Evaluate the effect of birth preparation coaching sessions on women's self efficacy for coping with labor pains and outcomes, through the following objectives:

1- Assessing the level of self efficacy among the studied groups.

2- Assessing the level of labor pain among the studied groups.

3- Evaluate labor outcomes among the studied groups.

4- Determine the correlation between labor pain, self efficacy and outcomes of labor among studied sample.

Research hypotheses

H1- Women who will receive birth preparation coaching sessions will have greater levels of self efficacy in coping with labour pain compared to those in the control group.

H2- Women who will involved in birth preparation coaching sessions will exhibit better labour outcomes compared to those in the control group.

H3- Among the study sample, there was a significant association between labor discomfort, self-efficacy, and labor outcomes.

Operational definition:

Self efficacy in childbirth refers to a type of self-belief among women and their assessment of their capacity to deal with labour pain. This construct contains the certainty that the recommended activities will be effective in producing the desired outcomes (outcome expectancy) and the full confidence that the recommended activity will be displayed during childbirth (efficacy expectancy).

Antenatal education coaching sessions are an adult learning approach where the coach motivates the learner to evaluate the effectiveness of practice or abilities and develop a plan for improvement and application of the action in present and future situations by reflecting on his or her activities.

SUBJECTS AND METHOD

Research Design

This study used a quasi-experimental research design with two groups (study and control groups).

Study setting

The current research was carried out in health care centers and the labor unit at DAR SAHET ELMAR`AA hospital in the Egypt healthcare authority at Port Said city. Labor unit at DAR SAHET ELMAR`AA hospital receives women at any time, all days of the week. While the antenatal care clinics in the health care centers of the comprehensive health insurance receive women for examination and follow up from Saturday to Thursday from 8 am to 8 pm.

Research Subjects

A purposive sample of primigravida women visiting antenatal care facilities. All the selected primigravida women who met the following criteria for inclusion: Women who are 20 to 35 years old, attending an antenatal clinic at 32 to 35 weeks gestational age, are primigravida (women who are first-time mothers feel more pressure to fit into their new roles as mothers; as a result, they are more likely to participate in birth preparation sessions), can read and write, are free from any medical or obstetrical disorders, free from twin pregnancy, malposition or presentation, and not missing more than one coaching sessions .

Sample size calculation:

Using findings from the published literature (El-Kurdy et al., 2017), a level of statistical significance of 5%, and an 80% research power, the sample size was calculated using the formula below.

n = [(Zα/2 + Zβ)2 × {2(SD)2}](Difference in average between the two groups)2 where

Zα/2: Depending on the level of significance, this equals 1.96 for 5%. Zβ: Depending on the power, this is 0.84 for 80%.

The standard deviation (SD)

Consequently, n= [(1.96 + 0.84)2 × {2(15.68)2}]/ (5)2=65.90

The sample size was 66 according to the aforementioned methodology. In order to compare the self-efficacy of two groups of primigravida women in terms of labour pain and outcomes, a total sample size of 132 women was envisaged.

Methods for Data Collection

TOOL (I): Four main tools were used in this research

First tool: - A Structured Interviewing Questionnaire

It was written in Arabic and developed by El-Kurdy (2017) and Pinar et al. (2018) with modifications by the researcher to evaluate the general characteristics and recent obstetric history of the study population. It was consist in two sections:

Section 1: Details include age, place of residence, educational level, occupation , and income.

Section 2: Current obstetric history, including antenatal visits and gestational weeks.

Second Tool: - Childbirth Self-Efficacy Inventory (CBSEI)

It was adopted from Abujilban, Sinclair and Kernohan (2012) in Arabic language. Using the CBSEI, a self report instrument, the self efficacy expectancy (EE) and outcome expectancy (OE) for birth and labor are evaluated prior to and following participation in birth preparation coaching sessions.

The definitions of self-efficacy expectancy and outcome expectancies are, respectively, "personal conviction that they are effective in carrying out the necessary behaviors in a specific situation" and "the conviction that a specific action will result in a specific outcome"

The - CBSEI included 62 items and was separated into four sub scales that were sessionified into two main sections:

- **Section I: -** Two subscales include EE-fifteen elements and OE-fifteen elements are assessed when contractions are less than five minutes apart during the initial stage of labour.
- **Section II: -** Two subscales include EE-sixteen elements and OE- sixteen elements are assessed during the push to deliver the baby in the second stage of labour. The participants rank their opinions of the behaviours described for each subscale on a Likert scale with a scale of the EE subscales range from one for not at all sure to ten for extremely sure, and the OE subscales range from one for not at all helpful to ten for extremely helpful. The overall score varying from zero to one hundred and fifty because the two active labour (AL) subscales each have fifteen elements. The overall score varying from zero to one hundred and sixty because the second stage (SS) has two subscales, each with sixteen elements. The outcome AL and outcome SS scale scores are combined to get the birthing OE score. The efficacy-AL and efficacy-SS ratings are added together to provide a childbirth EE score. The aggregate score for each component ranges from 31 to 310 and comprises the result expectations and the self-efficacy expectancies.

Third tool: Numerical Rating Scale (NRS):

It was developed by Chien, Bagraith, Khan, Deen, Syu and Strong (2017). Women

were encouraged to rate how much pain they were experiencing. The NRS gave women the choice of vocally rating their pain on a scale of 0 to 10 or visually indicating their level of discomfort by placing a dot on a line. Scores of 0 and 10 denote the absence of pain and the intensity of the pain, respectively. Scores of 1 to 3 describe mild discomfort, 4 to 6 represent moderate discomfort, and 7 to 10 denote severe difficulty and discomfort. The first and second stages of birthing involved the use of this instrument.

Fourth tool: Childbirth Outcomes Sheet

It was developed by Abd Elfattah (2022) to evaluate maternal and newborn outcomes, includes the mode of delivery, the requirement for a caesarean section if it is indicated, the presence of any intrapartum complications, the duration of labour, the weight of the newborn, the admission to the Neonatal Intensive Care Unit (NICU) and the apgar score.

Tools validity: Nine specialists in the domains of obstetrics and gynecology nursing and psychiatric health nursing evaluated the instruments' content validity. The finished form was ready for use after the suggested revisions were made.

Reliability: The study instrument underwent an Alpha Cronbach reliability analysis. The birthing outcomes sheet had an acceptable internal consistency of r = 0.76, the numerical rating scale had an acceptable internal consistency of r = 0.79, and the childbirth self-efficacy inventory had an acceptable internal consistency of r = 0.96.

Ethical consideration: The study received permission from the Port Said University Faculty of Nursing's Research Ethics Committee with agreement code NUR 4/6/2023 (26). Every woman in the study sample was made aware that taking part in the study is completely optional. The goals of the study were explained to every primigravida woman in the study population. They were made aware that all research data would be kept private and only utilized to further the study's goals. The subjects' privacy was always protected. Prior to enrolment, the primigravida women signed written informed consents.

Administrative design: After the nursing faculty formally requested permission to gather data from the necessary parties in the aforementioned setting in a letter, official approval was given.

Pilot study: The questionnaire was adjusted and assessed for time estimation, objectivity, clarity, and feasibility of the research for data collecting after a pilot study was conducted with 10% of the sample (13 primigravida women). The pilot study wasn't a part of the overall sample.

Field work

The preparatory phase, assessment phase, planning phase, implementation phase of the childbirth coaching sessions, follow-up and evaluation phases were all used to achieve the goal of this study. These phases took place over a six-month period, taking on at the start of October 2022 and finish at the completion of March 2022. Three days a week, from 9:00 AM to 12:00 PM, the researchers visited the places noted above until the target sample size was reached.

Preparation phase of the coaching program

To understand the scope and gravity of the study topic and to assist them develop the necessary data collection gathering tools, the researchers read during this stage, local and international relevant literatures on a range of problem-related topics.

Assessment phase of the coaching program

The researcher visited the study places throughout the study period and went through to locate the primigravida women whose matched the requirements for inclusion. Each primigravida women was met separately by the researcher, who thoroughly explained the purpose and parameters of the study in order to obtain the women's acquiescence and their written agreement. Complete instructions regarding the data gathering tools were

provided. The study's recruitment process included a tool I structured interview questionnaire and a tool II, CBSEI (pretest). After completing the baseline assessment, the researcher randomly assigned the women to birth preparation coaching groups and a control group.

Planning phase of the coaching program

The researcher created an Arabic version of the delivery preparation manual and provided it to the pregnant study group. It contains the following details: Preparations for labour, follow up and warning signs, healthy nutrition, exercises and its advantages, the many stages of labour and how to adapt to them, and the use of non-pharmacological pain relief techniques. There were educational and practical sections in the manual. Additionally, pictures were added to the text to add more illustration and aid the women in comprehension.

For self-practice at home, each participant received a guidebook that summarises the information covered in the birthing preparation coaching sessions.

Implementation phase of the coaching program

All study group conditions were presented to the control group. with the exception of antenatal education coaching sessions, and received standard prenatal care. To allow for individualised attention, involvement, and sharing of experiences, the study group's members were separated randomly into smaller groups, each of which had about six women. They were given the option to participate in 270 hours of formal birthing coaching sessions.

It was divided into three 90-minute sessions each week. At the conclusion of the session, each primigravida woman was given information concerning the timing of the following session. In order to accommodate the varying educational backgrounds of the women, the next session started with a discussion on the feedback from the previous session and the objectives of the current session. Questions from women were addressed at the conclusion of each lesson to clear up any misunderstandings. Participants in the first session were between 33 and 34 weeks gestational. The goal of these sessions was explained during the first lesson. An explanation of how to use the delivery preparation booklet was given before it was implemented. The first session's topics covered periodic follow-up and pregnancy danger signals, third-trimester nutrition and exercising procedures, premonitory labour symptoms, difference between true and false labor pain, and stages and phases of labor.

The second session covered: childbirth techniques and adaptation to stages of labour for coping with labour pain and to reach a safe delivery. In the beginning, the researcher gave the participants an orientation of the labour and birth unit so that the primigravida women could become accustomed to the surroundings (self-efficacy arises from physiological and emotional factors). The researcher then showed how to exercise, change positions, control breathing, and relax during four stages of labour. Then they acted out a role-play where they were in labour situation.

The third session covered material that was covered in sessions one and two. Participants were advised as well to talk about whatever difficulties they had. Participants subsequently learnt various labour positions, breathing techniques, and relaxation methods during four stages of labour. When using these approaches correctly, the researcher offered encouragement and compliments (social persuasion source of self-efficacy). Posters, slide power point presentations, animation movies, and role play demonstrations were all used in the birth preparation coaching sessions.

Evaluation phase and follow up of the coaching program

At the end of the third session, another collection of CBSEI tool (posttest) was made with the women in the birth preparation coaching group, and data were again gathered from a control group simultaneously during a scheduled visit of antenatal clinic.

Through a scheduled visit to a prenatal clinic for updated information, the program supervision and follow-up of the study group's women were carried out.

Researcher also returned to the labour and delivery facility after getting the participants' contact information to confirm the time and sitting of labour. In order to assess women's birthing self-efficacy (follow up) using the CBSEI, the researcher was present during labour and delivery with each participant (from the study and control groups). Additionally, to assess labour pain using the NRS and to fill the sheet for birthing outcomes.

Statistical Design

Data was checked before being entered into the computer. The Statistical Package for Social Sciences (SPSS) version 20 was used to tabulate and analyze the data. The use of descriptive statistics (such as the standard deviation, frequency, mean, and percentages) was made. Significance assessments (chi-square, t test). A significant level value was considered when p at 0.05. was taken into account. A statistically significant level value was also taken into account when p at 0.01.

Results

According to **Table 1**, there was no variation that is statistically significant in the general characteristics between the study and control groups ($p>0.05$). Mean ages in study group were 23.657±4.151 and 23.457±4.520 in control group which reflect homogeneity of the group. Also, more than half of the study group lives in rural areas (60.0%) compared to control group live in urban areas (51.4%). In addition, about more than one quarter of the study group (40.0%) and control group (31.4%) had secondary education. Furthermore, both the study group and the control group were housewife and made up of more than two thirds (60.0% & 68. 2% respectively) and had enough family income (75.8% & 60.6% respectively).

Table 2 demonstrates that there was no statistically significant difference between the study and control groups in the quantity of prenatal care visits or gestational weeks ($p>0.05$). Additionally, about more half of the study and control groups had gestational weeks between 32 and 33 (59.1% & 51.4% respectively) and have received more than four antenatal care visits (68.2% & 65.7% respectively), which indicates group homogeneity.

In **Table 3**, the study and control groups' for outcome expectancy and self-efficacy expectancy are shown throughout pre, post and follow up birth preparation coaching sessions. There were no appreciable differences in the pretest mean scores for outcome and self-efficacy expectations between the study and control groups. But, there were very significant differences between the two groups during the posttest and the entirety of the follow-up phase ($p=0.000$). The table clearly demonstrates that the study group's mean scores for result expectancy and self-efficacy expectancy were greater.

Figure 1 illustrates total outcome expectancy and self-efficacy expectancy among studied groups during pre, post and follow up birth preparation coaching sessions. It was shown that there was improvement in outcome expectancy at posttest (97.2% & % 83.1%) and follow up phase (87.6%& 79.1%) compared to pretest phase (68.5% & 68.2%) among study and control group. Additionally, there was improvement in self-efficacy expectancy at posttest (97.8% & 86.5%) and follow up phase (82.3% & 82.1%) compared to pretest phase (70.9%) among study and control group.

The labour pain score among the studied groups at stages 1st and 2nd of labour is presented in **Table 4**. Primigravida women in the study and control groups reported an average first stage labor pain score of 5.08 ± 0.68 and 7.40 ± 0.5, respectively. Additionally, women in the study and control groups experienced second stage labour pain on average at 6.52 ± 0.5 and 8.56 ± 0.7 respectively. Moreover, this table showed mean score for labor pain throughout the first and second phases of labor varied significantly between the two groups ($p = 0.001$).

Regarding labour outcomes as a basis, **Table 5** shows how women are dispersed. The method of delivery, the prevalence of intrapartum problems and the labour duration were found to differ statistically significantly between study and control groups with regard to women outcome (p=0.010, 0.015 and 0.005 respectively). Additionally, according to outcomes of newborn, In terms of birth weight, there was no difference between the studied groups. (p=0.456), but in terms of apgar score and ICU admission there was a statistically significant difference (p=0.002 & 0.012, respectively).

Figure 2 displays the studied groups according to mode of delivery. It was shown that 28 percent of the study group had a normal delivery, compared to only 16.7 percent of the control group.

Table 6 demonstrates a substantial very significant correlation among the study's dependent variables. According to the findings, there is a weak positive linear association between total labour pain score and overall labour outcome (r=0.266) and a moderate positive linear correlation among total labour pain score and total self-efficacy score (r=0.611). Additionally, there is a weak positive linear association (r=.267) between the overall self-efficacy score and the overall labour outcome.

Table 1 Distribution of the studied groups regarding general characteristics.

General characteristics	Study groupn=66		Control groupn=66		X^2	p-value
	No	%	No	%		
Age in (years)						
20 <25 years	30	45.7	32	48.6	1.18	0.135
25 <30 years	32	48.6	30	45.7		
≥30years	4	5.7	4	5.7		
Mean ±SD	23.657±4.151		23.457±4.520			
Residence						
Rural	40	60.0	32	48.6	0.921	0.147
Urban	26	40.0	34	51.4		
Educational level						
Read & write	9	14.3	8	11.4	1.809	0.081
Primary education	5	5.7	9	14.3		
Preparatory	9	14.3	9	14.3		
Secondary	26	40.0	21	31.4		
University	17	25.7	19	28.6		
Occupation						
Housewife	40	60.0	45	68. 2	0.111	0.067
Employed	26	40.0	21	31.8		
Income						
Enough	50	75.8	40	60.6	1.722	0.067
Not enough	16	24.2	26	39.4		

Table (2): Frequency distribution of present obstetric history among the studied groups.

Present Obstetric History	Study groupn=66		Control groupn=66		X^2	p-value
	No	%	No	%		
Gestational weeks						
32 – 33	39	59.1	34	51.4	1.19	0.038
34 – 35	27	40.9	32	48.6		
Range	32-35		32-35			
Antenatal care visits						
> 4	45	68.2	43	65.7	3.150	0.067
≤ 4	21	31.8	23	34.3		

Table 3 Distribution of studied groups regarding outcome expectancy and self efficacy expectancy scores throughout pre, post and follow up birth preparation coaching sessions.

Childbirth Self-Efficacy Inventory Subscales	Study group (n=66)		Control group(n=66)		Test of Significance	
	Mean	SD	Mean	SD	t-test	p-value
Pretest						
Outcome Expectancy	136.51	5.25	135.78	5.12	0.601	0.537
Self Efficacy Expectancy	147.23	6.45	147.21	6.45	0.012	0.989
Posttest						
Outcome Expectancy	238.16	7.58	132.32	19.63	33.192	0.000*
Self Efficacy Expectancy	241.32	7.08	151.05	19.92	28.053	0.000*
Follow Up Assessment						
Outcome Expectancy	235.38	5.58	136.93	24.83	25.657	0.000*
Self Efficacy Expectancy	239.47	9.26	151.58	22.16	25.945	0.000*

t = Independent Samples Test

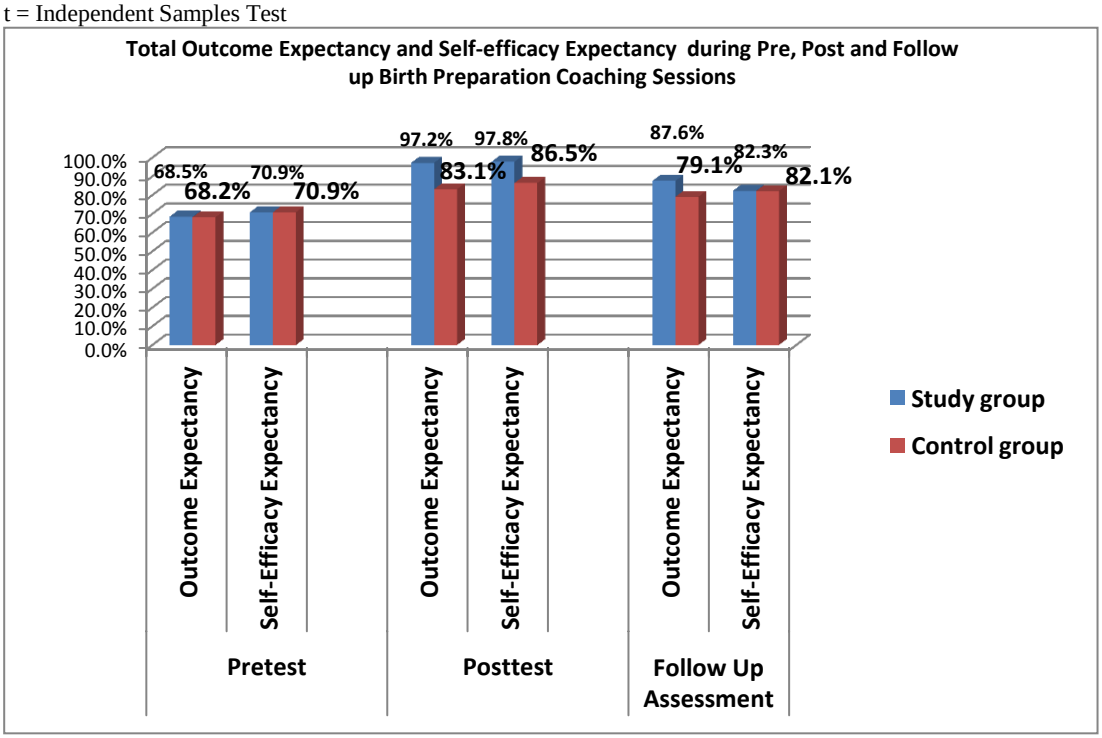

Figure 1: Distribution of studied groups according to total outcome expectancy and self-efficacy expectancy during pre, post and follow up birth preparation coaching sessions (N=132).

Table 4 Distribution of studied groups regarding labour pain score at stages 1st and 2nd of labour

Labour Pain Score	Study Group (n=66)		Control Group (n=66)		Test of Significance	
	Mean	SD	Mean	SD	t-test	p-value
1st Stage of Labour						
	5.08	0.68	7.40	0.5	19.913	0.001*
2nd Stage of Labour						
	6.52	0.5	8.56	0.7	16.247	0.001*

Independent Samples Test(t)

Table 5 Distribution of studied groups according to labour outcomes.

Outcomes of Labour	Study group		Control group		X2	p-value
	N (66)	%	N (66)	%		
Maternal outcomes						
Type of delivery Spontaneous Vaginal Delivery	19	28.0	11	16.7	0.311	0.010*
Cesarean section	47	72.0	55	83.3		
Indication of CS				%		
Mal-presentation	17	37.0	12	22.0		
Cephaopelvic disproportion	10	21.0	9	15.5	6.628	0.939
Fetal distress	15	31.5	19	34.5		
Pregnancy complications	5	10.5	15	28.0		
Intra-partum complications:						
None	66	100.0	61	92.0		
Bleeding	0	0.0	4	6.0	4.248	0.015*
Prolonged labour	0	0.0	1	2.0		
Duration of Labour						
1st stage of labour	113.33 ± 70.52min		181.10±153.96 min		2.14	0.005*
2nd stage of labour	19.20 ± 8.56 min		30.47 ± 18.32 min		0.55	
3rd stage of labour	4.76 ±.36 min		4.80 ± 1.88 min		3.50	
Newborn outcome						
Birth weight :						
< 2500 gm	7	10.0	8	12.0	12.77	0.456
2500-3500 gm	56	86.0	51	78.0		
>3500 gm	3	4.0	7	10.0		
Mean and SD	2829.0± 416.8		2798.0±541.7		22.519	0.425
Apgar score:						
From 7 -10	66	100.0	54	82.0	9.785	0.002*
Less than 7	0	0.0	12	18.0		
Admission to ICU:						
Yes	0	0.0	8	12.0	7.628	0.012*
No	66	100.0	58	88.0		

* Statistical significant at p≤ 0.05

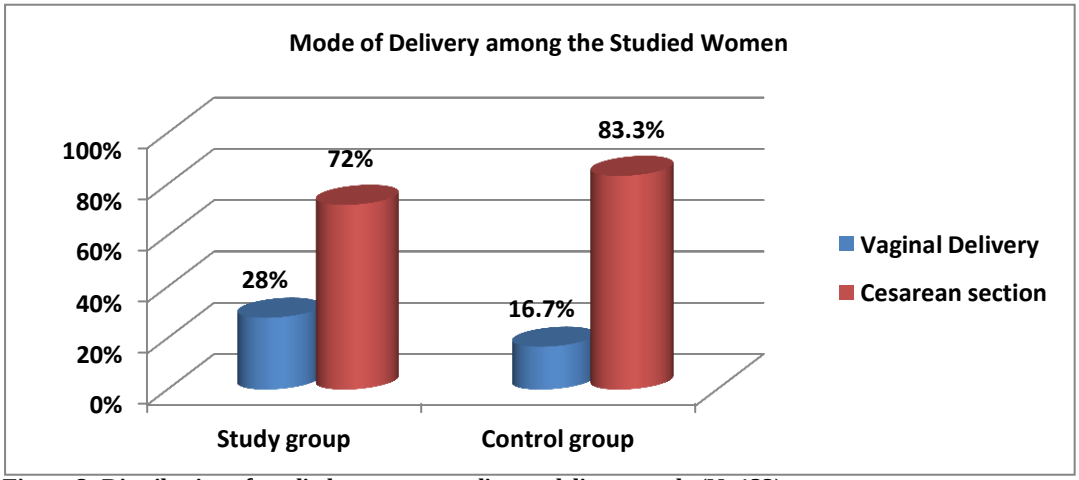

Figure 2: Distribution of studied groups according to delivery mode (N=132)

Table 6 Correlation between total labour pain score, total self-efficacy score and total labour outcome.

Characteristics		Total Labour Pain score	Total Self-Efficacy score	Total Labour outcome
Total Labour Pain score	Pearson Correlation r value		.611**	.266**
	p value		.000	.000
Total Self-Efficacy score	Pearson Correlation	.611**		.267**
	p value	.000		.000
Total Labour outcome	Pearson Correlation	.266**	.267**	
	p value	.000	.000	
** Correlation is significant (2-tailed) at the 0.01 level				
* Correlation is significant (2-tailed) at the 0.05 level				

Discussion

According to **Oats and Abraham (2017),** pregnancy and childbirth are long processes that are accompanied by physiological, emotional, and psychological, changes that can negatively impact on the woman, the fetus and the family. In order for women to have a safe and emotionally gratifying labour experience and a quick recovery both mentally and physically in the puerperium, the parental expectations during labour have a significant influence in defining a woman's response to birthing experience **(Rahul 2018).**

Birth preparation sessions will be effective if they are combined to provide useful, simple, proper information as well as essential skills. Before the 36th week of pregnancy, pregnant women must be fully informed about the labour and delivery process, with a focus on a childbirth plan, birthing preparation, labour onset, and techniques of pain relief **(Mohaghegh et al., 2023).** Participation in birth preparation coaching sessions has been linked to improved relationships between women and healthcare providers, increased levels of knowledge and skills regarding childbirth, and increased confidence and self-efficacy in primigravida women for labour and delivery. It has also been linked to reduced labour pain and a reduced need for analgesics due to decreased anxiety **(Alavi, Zaheri & Shahoei, 2023).**

Therefore, the current research aimed to evaluate the effect of birth preparation coaching sessions on women's self efficacy for coping with labor pains and outcomes. The results of the current study showed that taking childbirth education coaching sessions improved primigravida women's ability to cope with labour pain, which improved labour outcomes

in comparison with control group. The research hypotheses were consequently accepted.

Regarding the mean of the study groups' overall self efficacy expectancy scores throughout the program phases. According to the studied groups, there were no significant changes in mean scores for overall self-efficacy expectancy at the pretest, but there were at the posttest and follow up evaluation. Clearly, the study group's mean score for both expectancies was greater. This might be because women who attended coaching sessions learned how to be more independent during labour, more confident, and less afraid during the entire childbirth process. Additionally, understanding coping mechanisms for labour pain might help women become more confident in their ability of giving birth.

In this context, **Shirvani and Tayebi (2021)** mentioned that primigravia women with childbirth experience as a significant pregnant women who had taken childbirth education sessions exhibited considerably higher levels of self-efficacy in relation to childbirth and its related characteristics than those who just got normal prenatal care. This results also, is in line with **Munkhondya et al. (2020)** who mentioned that the study group's mean birthing self efficacy score was greater than the control group, which got standard medical treatment. Additionally, Hassanzei et al.'s research from 2022 demonstrated that the educational intervention can greatly raise primigravida women's self-efficacy during labour and lower their need for CS.

Similar to this, Duncan et al.'s study from 2017 demonstrated that the intervention group's mean CBSEI was considerably higher than control group's (80% CI; mean change differential of 64.4). Also, this outcome was comparable to that of a study by **Isbir et al. (2016),** which found after intervention, there was a significant difference in the mean CBSEI scores, $p = 0.01$.

Numerical Rating Scale was used in the current study to compare the two groups' experiences of labour pain at the first and second stages of delivery. This study showed that at stages first and second of labour, primigravida women in the study group experienced much less pain than those in control group. It might be because the women whose participated in study were learned coping mechanisms for labour pain and well informed, which resulted in a positive attitude towards typical childbirth and less anxiety.

According to **Hamid and Fadalla, (2019),** who investigated how prenatal education affected birthing pain and anxiety in Iran, the experimental group experienced reduced discomfort during labour. In addition, **Firouzbakht et al. (2015)** discovered that the study group experienced significantly less labour pain during 8–10 cm of cervical dilatation at transitional phase.

In congruence with this **Firouzbakht et al. (2014)** showed at the second stage of labour, no significant differences between the studied groups of Iranian women who were undergoing prenatal education. The different findings from the current study compared to other studies could be the result of the examined groups' varied pain thresholds and pain tolerance.

According to the current study's pretest statistically significant between the studied groups as regards of intra-partum problems, the control group's women experience greater complications than the study group. This is supported by **Taneja et al. (2021),** which discovered that birth preparation for women around the time of delivery has a positive impact on reducing intrapartum complications.

However, the findings of this study were at inconsistent with those of **Gururani et al. (2016)** who evaluated disorders of pregnancy and their management at home. The majority of the women who were evaluated, according to their findings, suffered perineal tear and bleeding. The disparity in the study's findings could be attributed to the study's subjects' poor educational backgrounds, decreased kegal exercise usage, and bad lifestyle choices.

According to the current study, more over a quarter of women in the study group give birth vaginally normally, in comparison to a fifth of women in control group. This might be as a result of the fact that women who received birthing preparation training had useful abilities that elevated their self-esteem and reduced their worry during the entire childbirth process.

These results are in agreement with **Ricchi et al. (2020),** who found that childbirth education session attendees had a greater rate of

normal vaginal birth and a fewer caesarean deliveries than session non-attendees. They are also consistent with **Gluck et al. (2020),** who found that childbirth education session attendees had a greater rate of normal vaginal birth and a fewer of caesarean deliveries.

The current study also showed that the study group's mean labour duration was little shorter than control group's, with a statistically difference among the studied groups. This may be because birth preparation coaching sessions were successful in enhancing all aspects periods of labour and delivery process.

The results of the current research corresponded with those of **Yohai et al. (2018),** who mentioned that women who had taken a childbirth education training had markedly reduced mean first stage labour durations (P = 0.036) in addition to mean total labor durations that are considerably shorter (P = 0.026). Additionally, **Abd Elfattah et al. (2022)** noted that the primigravida women who took part in the study group had much shorter average first and second stage labours than those in the control group.

According to **Ellis and Roberts (2020),** the current study discovered a significant difference in newborn outcomes between the studied groups, with the experimental group showing much better results with regard to admission of new born to the Neonatal Intensive Care Unit (NICU), than those of control. According to research by **Ashour et al. (2021),** specialists who teach birth preparation sessions are better equipped to evaluate how physicians follow recommended protocols while treating patients, which has led to an increase in the proportion of safe births and a decrease in the ratio of difficulties for both the mother and the newborn.

The total labour pain score and the total self-efficacy score and had a moderately positive correlation in the current study. The relationship between the overall labour pain score and the overall labour outcome was also weakly positive correlation. Furthermore, there was a weakly positive correlation between the overall self-efficacy score and the end result labor outcome. Similar results found by **Tilden et al. (2016),** who suggested that the clinical application of childbirth training sessions could be an important supplementary technique to enhance labour outcomes, promote childbirth self-efficacy, and lessen discomfort of pain in labouring women.

In congruence with this, **Said et al. (2022)** reported that at the follow-up stage, there was a negative aspect, statistically significant positive correlation among the total pain score, total labour results, and total efficacy for both the study and control group. Results from the current study and those from earlier studies can be different because of the research context, the small sample size, different general demographic characteristics, etc.

Conclusion

According to the current study's findings, it was determined that primigravida women who attended childbirth coaching sessions (the study group) had higher levels of self efficacy in managing labour pain than those who did not (the control group). Additionally, primigravida women in the study group who took birthing coaching sessions saw better birth outcomes than primigravida women in control group whose just received standard medical care. Furthermore, within the study sample, there were positive significant correlation between the total pain score, the total efficacy score, and overall labour outcomes.

Recommendations

Based on the findings of the current research, the following suggestions were made:

- Posters and brochures about easy ways to deal with labour pain should be distributed to outpatient clinics in order to improve pregnant women's self-efficacy, especially primigravida.
- The researchers recommended that birth preparation coaching sessions be seriously supported in every antenatal clinic based on the finding that these study were significant in improving women's self efficacy in coping with labour pain as well as improve childbirth outcomes.

Further Researches

- To ensure that the findings are as broadly applicable as possible, it is strongly advised that the study be replicated using a large representative probability sample at several maternity clinics.
- Since the study only included the opinions of women, additional research should be done to include the thoughts and replies of midwives and nurses.
- Future investigation is also required on the causes of birth phobia. Utilizing several techniques for measuring anxiety and depression.

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