

## Effect of Hypnobirthing Preparation on Pain Intensity, Anxiety, and Satisfaction among Parturient Women

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### Abstract:

**Background:** Worldwide interest in hypnobirthing has grown as an empowering and upbeat approach to childbirth. Hypnobirthing is a technique for preparing pregnant women for childbirth that aims to get them psychologically and physically ready to deliver in a less painful, self-conscious, and fear-free manner. **The aim** of such research was to explore the effect of hypnobirthing preparation on Pain Intensity, Anxiety, and Satisfaction among parturient women. **Design:** a quasi-experimental research design was applied in the study. **Setting:** The study was conducted at the antenatal outpatient clinic & and labor ward at Damanhour National Medical Institute. **Subjects:** A purposive sample of 80 pregnant women was selected. **Tools:** four tools were used for data gathering. **The first tool:** Basic data structured interview schedule. **The second tool** is the Visual Analog Scale (VAS). **The third tool** is the Beck Anxiety Inventory (BAI) this tool was created by Beck et al. (1988) to measure the severity of anxiety. **The fourth tool:** The Birth Satisfaction Scale-Revised (BSS-R). This tool was created by Martin and Martin (2014) to measure women's satisfaction with care and experience of labor. **Results:** Regarding the Visual Analog Scale rating there was a statistically significant variation between the control and the study group after intervention where  $p = (<0.001)$  in favor of the study group. Also, A highly statistically significant difference was found in relation to the level of anxiety between the control and the study group after intervention where  $p = (<0.001)$  in favor of the study group. Furthermore, it can be observed that (57.5%) of women in the control group were dissatisfied compared to none (0.0 %) of women in the study group. Moreover, none (0.0 %) of women in the control group were satisfied compared to (72.5 %) of women in the study group. **Conclusion:** Hypnobirthing application during the active phase of the first stage of labor significantly reduced labor pain intensity and anxiety level. Additionally, utilizing it gave satisfaction for laboring woman. **Recommendations:** Including the hypnobirthing preparations with standard hospital care prior to delivery to enhance the experience of labor

**Keywords:** Hypnobirthing preparation, Pain intensity, Anxiety, Satisfaction, Parturient women.

### Introduction

Labor is a normal process that needs to be monitored. There is no set standard model for labor, and each stage of this process has unique characteristics. However, expectant mothers and their partners desire a trouble-free, pain-free, and satisfying delivery. Throughout this process, they also encounter a variety of complicated emotions like anxiety, stress, and fear (Buran & Aksu, 2022).

Pain is the most obvious factor of the labor experience and an inevitable element of labor. Cervical dilation, uterine contractions, and uterine extension all contribute to pain sensation during labor. Women who fail to control their labor pain may experience serious consequences including prolonged labor that may elevate the risk of fetal distress, head compression, intrauterine fetal mortality, low Apgar scores, physical harm to neonates and an

increased possibility of cesarean delivery (**Abd Elkhalik et al., 2021**).

Primiparous women experience longer and more intense labor pain, which brings adverse psychological impacts like dread, worry, and self-confidence loss. Anxiety activates the sympathetic nervous system, which then releases stress-related hormones like noradrenaline, cortisol, and adrenaline. This lengthens labor and makes labor pain more severe. As a result, one of the primary considerations during labor is determining how to deliver maximum pain relief and relaxation with the fewest possible repercussions (**Tabatabaeichehr & Mortazavi, 2020**).

In order for women to employ non-pharmacological pain-relief approaches correctly and efficiently to relieve pain, anxiety and control labor, they must have the necessary information and training (**Pietrzak et al., 2023**). As a result, nurses from all over the world actively participate in prenatal training programs where various strategies are used. The antenatal education programs cover the adaptability of the prospective mothers to pregnancy and self-care, birth preparation, awareness of harmful situations and postpartum contraception can be planned (**AIDughaiishi et al., 2023**).

Hypnobirthing was a technique for preparing pregnant women for childbirth that attempts to get them psychologically and physically ready so they can deliver in a way that is less painful, less self-conscious, and fear-free. Couples approaching the later stages of pregnancy and birth might use this form of childbirth preparation, which is a predetermined program of instructions (**Bulez et al., 2018**).

Marie Mongan was the pioneer of hypnobirthing. Its foundation is the idea that childbirth is healthy and natural. Women can give birth calmly. In an effort to instill positive intentions and suggestions into the soul and the subconscious mind during labor, she created a birth education program by fusing the benefits of natural delivery and self-hypnosis which is an effort to implant positive attitudes and suggestions into the soul and subconscious mind during labor. In 1990, Mongan used this

method for the first time when her granddaughter Maura was born. Women who used hypnobirthing can accommodate their natural delivery instincts and include their partner in the process (**Atis & Rathfisch, 2018**).

Mongan focused on the "fear-tension pain" theory advanced by English obstetrician Dr. Grantly Dick Read, a pioneer of natural childbirth who wrote *Childbirth without Fear* in 1933. Dr. Read highlighted the variables that contributed to labor pain, split the mind and body into two poles, and proposed that researchers should study into these poles in order to comprehend and prevent suffering (**Skeide, 2021**).

Superstitious beliefs, cultural levels, and civilization all have an impact on how painful and fearful giving birth is for women (**Erbil, 2022**). The fundamental tenet of hypnobirthing is that childbirth is a healthy and normal phenomenon for women. Hypnobirthing offers firm and comforting instructions for women to support women's intrinsic birthing abilities (**Slamet et al., 2022**).

By embracing the body's intrinsic birth knowledge and working with it and the baby, the hypnobirthing mother learns to relax throughout the delivery process. Pain, fear, and tension can all be let go of by the woman. The length of each stage of labor is shorter and less pain medication is required. This lowers the risk of complications during labor as well as decrease the amount of blood loss. Furthermore, it will hasten the healing and recuperation process as well as strengthen the link between the mother and child after birth. The woman has a satisfying delivery experience consciously and calmly with her baby and family (**Darma et al., 2020; Safitri et al., 2023**).

Maternal satisfaction during labor was a multidimensional term which affected by various factors and is difficult to evaluate objectively. The mother's perspective of care, the mother's control over herself, interpersonal support, and medical interventions all have an impact on her satisfaction. Additionally, a pleasant delivery experience is influenced by the satisfaction of the mother during labor.

A positive trajectory for the mother and baby is set in motion by a satisfying delivery experience. Women who have positive delivery experiences report feeling empowered by childbirth, have higher self-esteem, and are more likely to confidently practice health-promoting behaviors like breastfeeding (Karoni et al., 2020; Mollard & Kupzyk, 2022).

### **Significance of the study:**

Pain, anxiety, fear, and low birth satisfaction associated with normal vaginal delivery have been identified as the primary causes of elective cesarean sections. Increased rates of cesarean sections are serious issues that raise medical expenses and have a detrimental impact on the health of mothers and babies. Thus, worldwide pregnancy education initiatives with the goal of reducing the number of cesarean sections performed are still crucial (Angolile et al., 2023).

Anxiety during the labor can also cause increased labor pain intensity, because the cortisol hormone reduces the release of endorphins. The high level of labor pain would also contribute to negative labor experience. Guidelines from the World Health Organization (WHO) state that having a positive birth experience is crucial throughout labor. One of the service benchmarks established by WHO to deliver high quality of care and assess the structure of the Health Service System is maternal satisfaction which needs to be regarded as one of the most relevant metrics in the midwifery (Sadiyah, 2023).

Despite the fact that hypnobirthing has gained popularity in the United States and other European countries since the 1990s. There isn't much research on the topic, so more carefully planned randomized controlled studies that can produce scientific data are needed. So the following study aims to explore the effect of hypnobirthing intervention on labor pain, anxiety, and satisfaction among primigravidae

### **Aim of the research**

**This research aimed to** explore the effect of hypnobirthing preparation on pain intensity, anxiety and satisfaction among parturient women.

### **Research Hypotheses:**

**H0:** Parturient women who receive hypnobirthing preparation will show the same pain intensity, anxiety, and satisfaction level as those who do not.

**H1:** Parturient women who receive hypnobirthing preparation will show lower pain intensity than those who don't receive it

**H2:** Parturient women who receive hypnobirthing preparation will show a lower anxiety level than those who don't receive it

**H3:** Parturient women who receive hypnobirthing preparation will show a higher satisfaction level than those who don't receive it

### **Materials and Method**

#### **Materials:**

#### **Research design:**

A quasi-experimental research design was utilized in order to achieve the aim of the study, where the effect of hypnobirthing preparation (independent variable) on pain intensity, anxiety, and satisfaction (dependent variables) among parturient women was examined.

#### **Setting:**

The study was carried out at the antenatal outpatient clinic & labor ward located at Damanhour National Medical Institute. This hospital was affiliated to the Ministry of Health in El-Beheira Governorate, Egypt. It was particularly chosen because it was a major hospital that serves Damanhour City and the surrounding areas. Also, the turnover of the cases was satisfactory for the study

**Sampling:**

A purposive sample of eighty pregnant women from the previously described setting was chosen based on the following inclusion criteria:

- With normal pregnancy course
- During a pregnancy's third trimester ( from 28-30 week of gestation)
- Primigravida & singleton pregnancy
- Did not suffer from any medical or gynecological problems
- Having normal vaginal delivery
- Available during the data collection period.

**Epi info 7 statistical program was utilized to estimate the sample size using the following parameters :**

- A. Population Size equal 1300 /3 months
- B. Expected Frequency is 50%
- C. Acceptable Error is 10%
- D. Confidence Coefficient is 95%
- E. Minimal Sample size is 80

**Tools:** Four tools were employed to gather the data:

**Tool one:** Basic data structured interview schedule. This tool was developed and used by the researchers. It included 2 main parts

Part one: Personal data such as age, level of education, occupation and residency.

Part two: Reproductive history including weeks of gestation as well as questions assessing the present pregnancy such as number of follow up and if the pregnancy was desirable and planned or not

**Tool II: Visual analog scale (VAS):**

The visual analog scale was created by **Melzac and Katz (1994)**. It was adopted and used by the researchers as a self-report tool that used a horizontal line to subjectively assess the woman level of pain. It measured pain on a 10-point numerical scale, with zero representing no pain and ten signifying the worst level of pain. Between these two opposing ends, a 3 cm distance was given the terms mild, moderate, and severe respectively. Women were instructed to mark the line at the point that symbolizes their level of pain (Alghadir et al., 2018).

The total score ranges from 0-10 as follows:

- A value of (0) indicates "no pain"
- A value ranging from (1-3) indicates " mild level of pain"
- A value ranging from (4-6) indicates "moderate level of pain"
- A value ranging from (7-6) indicates "severe level of pain"
- A value of (10) indicates "unbearable pain"

**Tool III: Beck Anxiety Inventory (BAI)**

This tool was created by Beck et al. (1988) to measure the severity of anxiety. It was adopted and translated into Arabic by the researchers .It consists of 21 items, each describing a common symptom of anxiety. The responses were measured on 4-point Likert scale ranging from (0) representing not at all to (3) representing severe anxiety .The scale's lowest score was 0 and the highest score was 63

- Based on the total score, the levels of anxiety were graded into three categories:

- A value from (0-21) indicates "low anxiety level "

- A value from (22-35) indicates "moderate anxiety level "

- A value of ( $\geq 36$ ) indicates "high anxiety level"

#### **Tool IV: The Birth Satisfaction Scale-Revised (BSS-R):**

- This tool was created by Hollins Martin and Martin (2014) to measure women's satisfaction with care and experience of labor. It was adopted and translated into Arabic by the researchers. It consists of "10 statements", each of which was rated on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The scale's lowest score was 10 and the highest score was 50

- Based on the total score, the levels of satisfaction were graded into five categories:

- Completely unsatisfied for the values of 10-18

- Unsatisfied for the values of 19-26

- Neutral for the values of 27-34

- Satisfied for the values of 35-42

- Completely satisfied for the values of 43-50

#### **Method:**

The study was conducted as follows:

- Prior to commencing the research, the Damanhour University Faculty of Nursing's Scientific Research Ethics Committee approved the study on 16 November 2023

- In order to carry out the research, a formal authorization has been granted by the chosen study environments

- Tool (I) was developed by the researcher following a review of through literatures

- Tools II, III, and IV were adopted and the Arabic translation was implemented.

- Tools were assessed for content validity by a group of five experts in obstetrics and gynecology.

- Tools II, III, and IV were assessed for their reliability through using Cronbach alpha test and the three tools were reliable. The result was (0.86) for tool II, (0.84) for tool III, and (0.87) for tool IV.

- Ten percent of the sample (8 women) participated in the pilot study, which was conducted to assess the research tools' appropriateness and clearness, then the necessary modifications were undertaken

**After explanation and receiving a written consent from the women, they were randomly assigned to one of the following groups:**

**The control group** which included (40) pregnant women who received the routine antenatal care including instructions from nursing staff during third trimester follow up visits about danger signs of pregnancy and true signs of labor. Moreover, nursing staff gave each woman instructions about breathing exercise during labor

**The study group** which included (40) pregnant women who received the hypnobirthing preparation

**The study was accomplished according to the following steps.**

#### **I. Assessment phase:**

- All pregnant women who fulfilled the inclusion criteria were listed by the researchers, then contacted and invited to participate in the sessions.

- The researcher interviewed pregnant women individually at the antenatal clinic to acquire basic data (tool I). Then each small group of 15-20 women were given an explanation in the form of a

power point presentation for 25-30 minutes each time to be adequately informed about the study's purpose, design, and subject role

## **II .Development of hypnobirthing preparation phase**

Pregnant women and their husbands received hypnobirthing training. The study group divided into eight groups; each group composed of five couples. Hypnobirthing preparation session was conducted once a week for 2hours duration, with a total of four weeks. Power point presentation, videos, demonstrations and interactive education methods were used as educational materials. The entire training intervention was conducted in the training room of the hospital. **The content of the interventional program consists of:**

**First week: Establishing a favorable expectation** Overview of the hypnobirthing philosophy -Getting a better, more relaxed, and more safe delivery experience - words for giving delivery calmly and gentle tips for supporting natural birthing instincts rather than fighting them -seeing films of birth to help visualize calm deliveries

**Second week: adorably preparing the body and baby for birth:** Breathing, deepening, visualization, and self-relaxation are some prenatal bonding strategies - Using massage to prepare the body - Getting ready to be a parent

- Each woman instructed to practice breathing exercise, deepening and visualization techniques 30 minutes before sleeping every day.

**Third week: Getting ready to welcome the newborn and a general overview of labor process:** Getting ready for the arrival of the newborn - Physiology of Labor and active hormones at birth -welcoming the birth waves - settling down at the birthplace of choice - Activities and prompts from a companion - Gentle labor massage -Letting go of worries and unpleasant feelings

**Fourth week: Delivering the baby with love:**

Birth rehearsal- Engaging with the birthing process and experiencing the birth- The value of breastfeeding and breast milk -Family bonding with the baby and skin-to-skin contact

## **III. Implementation phase (During labor)**

- The researcher welcomed each woman in the delivery waiting room and gave her instructions to let labor's process to start naturally by allowing her body to go into labor on its own and waiting for spontaneous contractions to occur in the uterus.
- Each woman was instructed to relax in a comfortable position as semi -setting position or left lateral position to conserve energy during the first stage of labor, then she allowed to change position every 30 minutes and instructed to walk or sway while leaning on a support person or her husband
- Each woman was instructed to do breathing exercises taught in the training program including:

### **Slow paced breathing**

- During the first stage of labor, slow breathing techniques were used .woman was encouraged to take a deep breath to fill her lungs completely and exhale through her mouth if her cervical dilatation was less than 4 cm. When the woman started having contractions, the researcher told her to breathe deeply for five to ten minutes. She put one hand on her chest and the other on her lower abdomen while she breathed. Woman was given the instructions to take a deep breath as the contraction ended.

### **Modified paced breathing**

- A modified breathing technique was implemented during the first stage of labor when the woman's cervical dilatation was more than 4 cm. Woman was told to inhale deeply

until her lungs were full, then exhale through her mouth. Also, she was told to begin breathing slowly when a contraction starts. As the contraction intensifies, quicken and lighten her breathing pattern to achieve a respiratory rate of 38–40 breaths per minute. She was told to slow her breathing and exhale a cleansing breath as the contraction ended.

### **Patterned paced breathing**

- During the transitional period, pattern-paced breathing is employed (7–10 cm cervical dilatation). When the woman felt her contraction starting, she was told to inhale deeply and then to pant again. When she feels the urge to bear down, she should attempt blowing out her mouth to form the letter "O" like a candle in front of her face rather than exhaling all at once.

- Each woman was instructed to tense her abdominal muscles and apply greater pressure to her diaphragm while slowly inhaling and grunting.

- Between contractions, the woman was instructed to rest, and wait for the next one rather than pushing or bearing down. Woman was instructed to end contractions with cleansing breath.

• Each woman was instructed to practice visualization technique as follows:

- After the woman had settled in comfortable position and closed her eyes, she visualized herself in a lovely setting and considered the sights, sounds, and sensations she would experience.

• Each woman was instructed to perform progressive muscle relaxation techniques, which involve tensing and relaxing every muscle in the body, from the head to the legs, to feel the difference between stressed and relaxed muscles and to conserve the body's energy during the first stage of labor

• Women were allowed and encouraged to bring their husbands to the delivery waiting room to assist them in birth

preparations. The husbands encouraged the women to conduct breathing exercises and applied back massage for them

- The husband rubbed the sides of the spine from the shoulder to the base using the palms of his hands. Also, he massaged the base of the spine forcefully and circularly with the heel of his hand to counteract strong contractions

• The researcher observed the mother to ensure general welling throughout the delivery until their transfer to the postpartum room and instructed her to breast feed the baby right away and preserve bonding

### **IV. Evaluation phase**

- The subjects of both groups were assessed before intervention on admission to the labor ward at the beginning of active phase (4 cm cervical dilatation) to assess pain intensity, level of anxiety, and level of satisfaction using tools II, III, and IV as pre-test.

- Each woman was assessed after intervention at the end of the active phase (7 Cm cervical dilation) of labor to assess pain intensity, level of anxiety, and level of satisfaction using tools II, III, and IV as post-test.

-The control group was started and completed before the experimental group to avoid sample contamination.

- Collection of data consumed 6 months starting from December 2023 till the end of May 2024.

After data collection, the necessary statistical analysis was performed

The effect of implementing the hypnobirthing therapy was determined by comparing pain intensity, anxiety and satisfaction between the two groups

### **Ethical Considerations:**

- The purpose of the study and its benefits were communicated to all women then written informed consent was obtained prior to data collection.

- Data confidentiality was upheld while the study was being conducted.

- The women were made aware that they might leave the study at any time and that participation was entirely voluntary.

- Women's privacy was protected.

### **Statistical analysis of data**

- The data were fed into the computer and analyzed with IBM SPSS software package version 20 program. The qualitative data were described in terms of number and percent. The quantitative data were described using range (minimum and maximum), mean, and standard deviation. Chi-square, Fisher's exact test, marginal homogeneity test, student t-test, and paired t-test were utilized. In addition, the Shapiro-Wilk test was also employed to ensure that the distribution was normal. The obtained results were declared significant at a 5% level.

### **Results**

**Table (1)** revealed the distribution of laboring women based on their personal data. Regarding age, it was reported that more than four fifths 85.0% of the women in the control group were between 20-25 years old compared to 70.0% of the study group. Furthermore, 65.0% and 70.0% of the control and study groups respectively had secondary level of education. In relation to occupation, it was found that the majority (90%) of the control and the study group were housewives. Furthermore, the current residency shows that 90.0% & 85.0% of the control and the study group respectively were rural dwellers.

No statistically significant difference was discovered in relation to personal data between both groups of the study

**Table (2)** provided information on the distribution of the study participants according to their reproductive history. When the participants were propped about the follow up visits, they reported that 87.5 % of control group had regular follow up visits compared to all (100%) of the study group. There was no statistically significant difference between the two groups regarding the reproductive history

**Table (3)** clarified the distribution of the study participants in relation to labor pain intensity with the Visual Analog Scale (VAS). It was found that a moderate level of pain was reported by 62.5%, and 55.0% of the control and the study group respectively before the intervention. These percent decreased to 60.0% and 5.0% after intervention among the control and the study groups respectively. Regarding the Visual Analog Scale rating there was a statistically significant variation between the control and the study group after intervention where  $p = (<0.001)$  in favor of the study group.

**Table (4)** demonstrates the distribution of laboring women regarding their anxiety level. It was found that moderate level of anxiety was reported by 70.0%, 67.5% of the control and the study groups respectively before the intervention. These percent decreased to 67.5% and 20.0% after intervention among the control and the study groups respectively.

A highly statistically significant difference was found in relation to the level of anxiety between the control and the study group following the intervention where  $p = (<0.001)$  in favor of the study group.

Figure (1) revealed the comparison of satisfaction level among women in both groups after the hypnobirthing intervention. It can be observed that (57.5%) of women in the control group were dissatisfied compared to none (0.0 %) of women in the study group. Furthermore, none (0.0 %) of women in the control group were satisfied compared to (72.5 %) of women in the study group.



Table (1): Distribution of laboring women in both groups according to their personal data

Personal data	Control group (n = 40)		Study group (n = 40)		Test of Sig.	P
	No.	%	No.	%		
<b>Age (Years)</b>						
<20	2	5.0	6	15.0	$\chi^2=$ 2.884	MC <sub>p</sub> = 0.219
20 – 25	34	85.0	28	70.0		
>25	4	10.0	6	15.0		
Min. – Max.	19.0 – 27.0		19.0 – 28.0		t= 0.269	0.789
Mean ± SD.	22.60 ± 2.27		22.75 ± 2.70			
<b>Level of education</b>					$\chi^2=$ 0.838	MC <sub>p</sub> = 0.901
Illiterate	4	10.0	2	5.0		
Primary	6	15.0	6	15.0		
Secondary	26	65.0	28	70.0		
University	4	10.0	4	10.0		
<b>Occupation</b>					$\chi^2=$ 0.0	FE <sub>p</sub> = 1.000
Housewife	36	90.0	36	90.0		
Employed	4	10.0	4	10.0		
<b>Residence</b>					$\chi^2=$ 0.457	0.499
Rural	36	90.0	34	85.0		
Urban	4	10.0	6	15.0		

SD: refers to standard deviation

t: refers to the Student t-test

 $\chi^2$ : refers to Chi square test

MC: refers to Monte Carlo

p: p represents the p-value for comparing groups under study.

Table (2): Distribution of laboring women in both groups according to their reproductive history

Reproductive history	Control group (n = 40)		Study group (n = 40)		Test of Sig.	p
	No.	%	No.	%		
<b>Weeks of gestation</b>						
Min. – Max.	27.0 – 31.0		28.0 – 30.0		t= 0.477	0.635
Mean ± SD.	28.85 ± 1.08		28.75 ± 0.78			
<b>Follow up visits</b>					$\chi^2=$ 5.333	FE <sub>p</sub> = 0.055
Regular	35	87.5	40	100.0		
Irregular	5	12.5	0	00.0		
<b>Number of follow up visits</b>					t= 2.095*	0.040*
Min. – Max.	6.0 – 11.0		8.0 – 12.0			
Mean ± SD.	8.45 ± 2.49		9.50 ± 1.96			
<b>The current pregnancy desirable/ planned</b>					$\chi^2=$ 1.920	FE <sub>p</sub> = 0.359
Yes	36	90.0	39	97.5		
No	4	10.0	1	2.50		

SD: refers to Standard deviation

t: refers to Student t-test

 $\chi^2$ : refers to Chi square test

FE: refers to Fisher Exact

p: p value for comparing the examined groups

\*: Statistically significant "p ≤ 0.05"

#: Multiple answers

Table (3): Distribution of laboring women in both groups in relation to their labor pain intensity measured by visual analog scale

Visual analog scale (VAS)	Control group (n = 40)				Study group (n = 40)				$\chi^2$ ( <sup>MC</sup> p <sub>1</sub> )	$\chi^2$ ( <sup>MC</sup> p <sub>2</sub> )
	Before intervention		After intervention		Before intervention		After intervention			
	No.	%	No.	%	No.	%	No.	%		
No pain (0)	0	0.0	0	0.0	0	0.0	8	20.0	3.986 (0.130)	84.174* (<0.001*)
Mild pain (1-3)	0	0.0	0	0.0	0	0.0	30	75.0		
Moderate pain (4-6)	25	62.5	24	60.0	22	55.0	2	5.0		
Severe pain (7-9)	12	30.0	8	20.0	18	45.0	0	0.0		
Unbearable pain (10)	3	7.5	8	20.0	0	0.0	0	0.0		
<b>MH (p<sub>0</sub>)</b>	40.000 (0.058)				106.0* (<0.001*)					

$\chi^2$ : refers to Chi square test MC: refers to Monte Carlo MH: refers to Marginal Homogeneity Test

p<sub>0</sub>: p -value for comparing pre and post in each group.

p<sub>1</sub>: p value for comparing between the studied groups in pre

p<sub>2</sub>: p value for comparing between the studied groups in post

\*: Statistically significant ( $p \leq 0.05$ )

Table (4): Distribution of laboring women in both groups regarding their anxiety level

Beck Anxiety Inventory (BAI)	Control group (n = 40)				Study group (n = 40)				Test of sig. (p <sub>1</sub> ) Not sig	Test of sig. (p <sub>2</sub> ) sig
	Before intervention		After intervention		Before intervention		After intervention			
	No.	%	No.	%	No.	%	No.	%		
Low anxiety level	8	20.0	4	10.0	13	32.5	32	80.0	$\chi^2=4.897$ ( <sup>MC</sup> p= 0.086)	$\chi^2=$ 44.291* (<0.001*)
Moderate anxiety level	28	70.0	27	67.5	27	67.5	8	20.0		
High anxiety level	4	10.0	9	22.5	0	0.0	0	0.0		
<b>McN. (p<sub>0</sub>)</b>	35.500 (0.061)				4.815* (<0.001*)					
<b>Total score (0 – 63)</b>	18.0 – 36.0		17.0 – 40.0		17.0 – 35.0		5.0 – 22.0		t=0.405 (0.686)	t= 15.261* (<0.001*)
Min. – Max.	18.0 – 36.0		17.0 – 40.0		17.0 – 35.0		5.0 – 22.0			
Mean $\pm$ SD.	30.13 $\pm$ 6.61		31.65 $\pm$ 5.93		29.50 $\pm$ 7.17		11.60 $\pm$ 5.82			
<b>Average score (0 – 3)</b> <b>(Mean <math>\pm</math> SD.)</b>	1.43 $\pm$ 0.31		1.51 $\pm$ 0.28		1.40 $\pm$ 0.34		0.55 $\pm$ 0.28			
<b>t<sub>0</sub> (p<sub>0</sub>)</b>	1.130 (0.265)				14.530* (<0.001*)					

SD: refers to Standard deviation

t: refers to Student t-test

t<sub>0</sub>: refers to Paired t-test

$\chi^2$ : refers to Chi square test

MH: refers to Marginal Homogeneity Test

p<sub>0</sub>: p value for comparing between pre and post in each group

p<sub>1</sub>: p value for comparing between the studied groups in pre

p<sub>2</sub>: p value for comparing between the studied groups in post

\*: Statistically significant at "p  $\leq$  0.05"

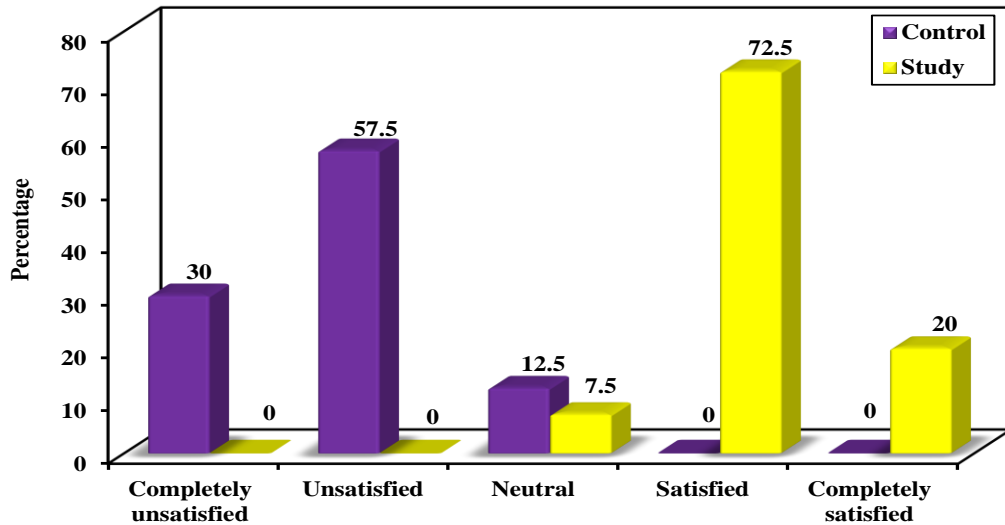


Figure (1): Comparison of satisfaction level among the laboring women in both groups after applying hypnobirthing intervention

## Discussion

Giving birth is a special and remarkable life experience. A key result of childbirth is the experience of giving birth and the quality of such experience could be adversely impacted by a many factors including pain, fear, unsupported birth, and a loss of control (Molgora et al., 2020). As a result, there is a rising need for less complicated more affordable, non-prescriptive and easily accessible techniques to facilitate the birth process and induce positive labor experience (Ebrahimian & Rahmani Bilandi, 2021).

A program called hypnobirthing addresses the mental, physical, and self-empowerment of women, their spouses, and babies as well as the peace of mind which could be achieved at homes, in the hospital or in the delivery room. The educational process of giving birth through hypnobirthing involves breathing, relaxation, visualization of meditation exercises, dietary attention, and positive body toning. The goal of hypnobirthing was to lessen or completely eradicate any tension, fear, panic, or other negative emotions that could cause a mother to become anxious during the delivery process (Atis & Rathfisch, 2018).

The results of the current study showed that there were no statistically significant differences in the basic data between the control and study groups in relation to age, level of education, occupation and current residence. These findings roll out the extraneous factors that might confuse the effect of hypnobirthing intervention

The present study's evaluation of labor pain showed that there was a highly statistically significant decrease in the levels of pain among the study group than the control group by the end of active phase of labor after the application of hypnobirthing intervention. This finding corresponds with a study of Kurnaesih (2021), who reported that hypnobirthing techniques can reduce the intensity of labor pain because they educate the body how to naturally relax, allowing all of the nerves in the body to function together harmoniously.

Also, the results of Tuju et al. (2020), study aligns with the finding of the following research, indicating that there was a significant effect of hypnobirthing intervention on the intensity of labor pain in the active phase of labor with a P value of ( $<0.05$ ). A randomized controlled trial of Sari et al. (2022), also revealed that hypnobirthing and prenatal yoga can significantly reduce labor pain and duration

for women in the first, second, and third stages of childbirth, when applied appropriately.

Moreover, the above mentioned results concurred with a randomized controlled trial of **Buran and Aksu (2022)**, who observed that the Visual Analog Scale scores of the hypnobirthing group was found to be significantly lower than those of the control group ( $p < .001$ ). As a result, the hypnobirthing intervention had a mitigating influence on labor pain experience during the active phase of the first stage of labor

In opposition, the current study findings are not congruent with the study conducted by **Bülez et al. (2020)**, who stated that hypnobirthing training had no effect on labor pain. This discrepancy between the results of both studies may be due to the effect of extraneous factors as pain may fluctuate according to the physical, psychological and environmental changes experienced by woman.

Regarding anxiety level, the current study finding showed that the study group's anxiety level decreased after the intervention with a highly significant differences between both group after intervention ( $p < 0.001$ ). This finding is in line with the study of **Raehan et al. (2023)**, who revealed that there were differences in anxiety levels before and after hypnobirthing from moderate anxiety to mild anxiety. As mothers were able to lower their anxiety level by practicing hypnobirthing, which helped them become more at ease and comfortable.

Additionally, the current study finding was corroborated by a study of **Yulizawati et al. (2023)**, who reported that pregnant women who use hypnobirthing techniques report feeling more secure and self-assured, which helps lower anxiety levels. Moreover, hypnobirthing had a positive effect on women's anxiety during the first stage of labor. **Uludağ and Mete (2021)** showed that after receiving hypnobirthing training, the respondents reported feeling less fear and anxiety when giving birth. Adding that hypnobirthing eases discomfort, promotes calm and confidence, eases relaxation, and aids with emotion regulation

Moreover, the outcomes of this study were concurred with those of **Runjati and Nurcahyani (2021)**, who observed that anxiety and tension levels dropped more dramatically for participants in the positive affirmation pregnancy program. The worry and tension levels of those who attended the positive affirmation pregnancy program decreased more dramatically. Combining belly breathing with positive affirmations can boost the parasympathetic nervous system's activity, induce relaxation, and encourage the release of oxytocin. Additionally, lowering cortisol levels would eventually benefit the mother and fetus, end insomnia, release blocked thoughts, lower stress, anxiety, and depressive symptoms.

Likewise, the current finding matches that of the study undertaken by **Slamet et al. (2022)**, who reported that hypnobirthing had a significant effect on maternal anxiety levels. Mothers who did hypnobirthing had lower anxiety levels than those who did not do hypnobirthing. In addition, the results of the current study were similar to findings of the study of **Asman et al. (2021)**, who indicated that there was a significant effect of hypnobirthing technique on the level of anxiety in trimester III mothers during preparation for childbirth where  $p$  value of 0.001. It was also mentioned that hypnobirthing teaches pregnant women to maintain composure, relax, and control their emotions. The goal of hypnobirthing is to help women give birth in ease and with less discomfort. Thus, hypnobirthing proved a helpful method for overcoming labor-related anxiety.

**Mudihayati et al. (2018)**, reported that an effective natural technique for relieving laboring women' stress, anxiety, and tension was hypnobirthing. Accordingly, the term "hypnobirthing" refers to the use of subconscious suggestion to assist the conscious mind, which directs the mother's movements during the labor process.

Healthcare administrators and providers had recently placed a great deal of emphasis on maternity services satisfaction among women, particularly with relation to the availability of high-quality care, sufficient staff support, and

effective communication throughout labor. The current study's findings showed that the majority of women were satisfied with the hypnobirthing intervention and conveyed that the intervention was easy to put into practice and a positive experience. This could be explained by the effectiveness of hypnobirthing interventions, which had been shown to lessen labor pain and anxiety.

Reduced levels of pain and anxiety had also been linked to better blood flow from the mother to the fetus, which promotes shorter labors. Consequently, it has a favorable impact on the mother's contentment with the delivery.

The current finding was consistent with a study of **Uludag and Mete (2023)** who found that the majority of women who used hypnobirthing techniques to prepare for childbirth reported feeling peaceful, content, and at ease during the delivery process. They were obviously both psychologically and physically prepared to give birth, and they had conscious childbirth experiences. They emphasized the value of their spouses and labor teams' assistance.

Furthermore, the current study showed that mother childbirth satisfaction was positively impacted by the use of hypnobirthing training ( $P < 0.001$ ), and these findings were consistent with the study of **Buran and Aksu (2022)**, who observed that the majority of women who received hypnobirthing training exhibited high levels of childbirth satisfaction, whereas the majority of women in the control group reported moderate levels of childbirth satisfaction.

The current study findings contradict the study of **Bülez et al. (2020)**, who reported that hypnobirthing training had no effect on birth satisfaction. These contradicting results may be related to difference in research designs, selection criteria of subjects, sampling techniques and research methodology.

Accordingly, the current study results showed decreased pain intensity, decreased anxiety level and increased satisfaction among women of the study group compared to the

control group after the application of hypnobirthing intervention. These results were congruent with the findings of the study conducted by **Sadiyah (2023)**, which revealed that a gender-responsive hypnobirthing class had a beneficial effect on lowering labor anxiety, lowering labor pain scores, and raising birth satisfaction..

Moreover, the current study's findings are consistent with **Buran and Aksu (2022)**, who found that women who underwent a 4-week course on hypnobirthing experienced reduced labor pain, decreased anxiety during childbirth, and increased birth satisfaction compared to women in the control group. Additionally, the results of the present study come in the same line with **Uludağ and Mete (2021)**, who reported that The hypnobirthing philosophy of nursing care reduced labor's pain, duration, and fear. Moreover, such philosophy decreased labor-related expenses and raised women's satisfaction.

These current study's findings are increasingly confirmed by **Bülez et al. (2019)**, who stated that when pregnant women attended prenatal education and birth preparation sessions and received labor support, their perception of giving birth improved. Hypnobirthing birth preparation programs should be implemented and made more widespread. Also, birth preparation education should be introduced into the curriculum to teach the hypnobirthing concept to students of midwifery and nursing

### **Conclusion:**

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The findings of the current research concluded that H1, H2, and H3 were accepted; while H0 was rejected, where hypnobirthing application during the active phase of the first stage of labor significantly reduced labor pain intensity and anxiety level. It also achieved satisfaction of laboring women with using it. This approach could improve the standard of care given during childbirth by decreasing the level of pain among laboring mothers.

**Recommendations:**

The present study's findings propose the following recommendations:

- Emphasize on increasing women's and medical professionals' understanding of the benefits of hypnobirthing preparations as a very effective non-pharmacological method of reducing pain and anxiety during labor.
- Trials for including hypnobirthing preparations with standard hospital care prior to delivery to enhance the experience of labor

**Further studies:**

- Further studies are required to investigate the effects of hypnobirthing preparations on neonatal outcomes
- Expand the study's generalizability by conducting it again with greater sample sizes and in various contexts.

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