A Study to Evaluate the Effectiveness of Patterned Breathing Technique on Pain during First Stage of Labour among Primigravida Mothers Admitted in Selected Hospital at Moradabad

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ABSTRACT

BACKGROUND: Breathing exercise is one of the extremely recurrent techniques used for universal pain relief on child bearing. During the first stage of labour, such breathing techniques can encourage physical relief by decrease muscles tension and encourage emotional relief by reducing the level of pain and well-oxygenated muscles function more successfully and fruitful. **Objective:** To assess pain level among primigravida women during the first stage of labor in experimental group and control group before practicing patterned breathing technique. • To assess pain level among primigravida women during first stage of labor in experimental group and control group after practicing patterned breathing technique. • To compare the pain level among primigravida women in experimental and control group. **Methods:** A comprehensive systematic search of published literature and journal articles from Pubmed to evaluate the effectiveness of patterned breathing technique on pain during first stage of labour among primigravida mothers that are focusing till 2017. **Result**: The researcher found that the mean pre-test score of pain level in primigravida women before practicing Patterned breathing technique in experimental was (2.6) which is less than control group which is (2.8) with a mean difference of (0.2), which is not significant as evident from 'z' value of (1.68) which is less than 0.05 level of significance. **Conclusion**: It was concluded from the statistical tests that practicing selected Patterned breathing technique was effective in reduction of pain among primigravida women during first stage of labor. Analysis of data showed that there was a significant difference between pre test and post test pain scores of pain level in experimental group after practicing Patterned breathing technique and without practicing Patterned breathing technique control group.

KEYWORDS: *Effectiveness, Patterned Breathing Technique, Labour Pain, Primigravida Women*

INTRODUCTION

"Pregnancy is a process that invites you to surrender to the unseen force behind all life."

-Judy Ford

Pregnancy and childbirth is a very special time in every woman's life which bring physical and emotional changes in the body. Pregnancy is one of the biggest imaginations and it changes into a worse dream when labour pain is progress. Labour can appear to be like a painful event of many pregnant women. First-time mothers are more likely to give their pain a higher rating than a woman who've had babies before. The childbearing women experience pain and discomforts during labour.

A pregnant woman, who breathes properly, in a pattern or rhythm during labor, benefits both herself

and her baby. This is because a Patterned Breathing helps in providing the baby as well as the mother the right amount of oxygen. Secondly, with the right breathing the mother is equipped to cope with the pain that contractions bring about.

Pain is observed to be both a physical and behavioral approach, and also it was a response from injury or physical changes as the effect in behavioral changes in our body. Pain is described as a combination of event that is very special for the human being. From the last 20 years, the approach of pain was esteemed as being what an individual understand about it (Montes-SL, 1999)

Childbirth is never the same and it may clash between women and between labour. It's said that considerable pain that Mother Nature delivers to a human, is during labour. Studies have shown that around 70% of women experience awful labour and around 10% of them experience an almost painless labour. The remaining women experience labour, which is no more shocking nor painless. There are many non-pharmacological methods for relieving labour pain. The suitable method is surely the one that is successful and safe. (Bobak IM, Jensen MD, 1993)

Labour pain is a complex, personal, subjective, multifactorial phenomenon which is influenced by psychological, biological, socio-cultural and economic factors. Labour begins with regular uterine contractions continues with hours of hard work and end as the woman and her family begins the attachment process with their newborn. The expected period of unpredictability, anxiety and fear, ending with pleasing birth of the baby. The result of breathing and relaxation techniques on labour pain was studied by many investigators, breathing and relaxation techniques were found to be the most helpful means for helping the mother during labour to reduce pain and discomfort.

Breathing exercise is one of the non pharmacological methods for reducing pain during pregnancy and labour. Research has appeared that simple breathing exercises can help to reduce labour pain and level of anxiety.

NEED FOR THE STUDY
Labour presents an anatomical and emotional demanding for women. As labour becomes more pending this can be a time of adverse feelings, fear and anxiety can be combined with anticipation and satisfaction. Pain related to labour has been characterized as one of the most powerful forms of pain that can be accomplished, although some women do not understand powerful pain during labor.

Labour comprises of three stages, relating to the expansion of the cervix, delivery of the baby and delivery of the placenta. The pain accomplished by women in labour is generating by uterine contraction, the dilatation of the cervix and in the late first stage and second stage, by the expansion of the vagina and pelvic floor to considerate the baby. Indian Council of Medical Research (2008) conducted a study shows that 25% of babies in India are born through the cesarean section in that 18% of the surgeries are elective. There has been at least a 25% rise in the number of women opting for cesareans in the last few years in Delhi. The majority of the women elected cesarean's due the fear of labour pain.

From the reviews, the researchers identified that the intensity of labour pain is very high and there is a need to alleviate the sufferings of the women during labour. Even through the literature review was done on breathing exercise for assessing effectiveness on reduce labour pain during first stage of labour, the investigator couldn't find any published article from the Uttar Pradesh state. The current study was planned to assess the effectiveness of Pattern Breathing Technique among primigravida mothers on first stage of labour.

STATEMENT OF THE PROBLEM
"A study to evaluate the effectiveness of Patterned Breathing Technique on pain during first stage of labour among primigravida mothers admitted in selected hospital at Moradabad."

OBJECTIVES OF THE STUDY
➢ To evaluate the effectiveness of Patterned Breathing Technique on labour pain during first stage of labour among primigravida mothers in selected hospital at Moradabad.

➢ To find the association between the levels of pain during first stage of labour and selected demographic variables among primigravida mothers in selected hospital at Moradabad.

HYPOTHESES
➢ **Hypothesis will be tested on 0.05 level of significant-**

➢ **H01:** There is no significant difference in pain after Patterned Breathing Technique during the first stage of labour among primigravida mothers.

➢ **H02:** There is no significant association between the levels of pain during the first stage of labour and the selected demographic variables among primigravida mothers.

CONCEPTUAL DEFINITIONS & OPERATIONAL DEFINITIONS

Patterned Breathing Technique
In this study Patterned Breathing Technique refers to a slow rhythmic, repetitive breath which will be half of the normal breathing count which will be repeated after each contraction to reduce the pain on the first stage of labour regarding primigravida mothers.

Pain
In this study pain is a self-report unpleasant situation arises due to the uterine contractions in the first stage of labour and will be measured by using Yazbek pain scale.

Primigravida mother
In this study, primigravida mothers refer a woman who is in the first stage of labour for the first time and admitted in the selected hospital at Moradabad.

First stage of labor
In this study, first stage of labor refers to an interval from the start of true labor pain to full dilatation of the cervix among primigravida mothers admitted in the labor room of a selected hospital at Moradabad.

MATERIAL AND METHOD

Research approach
Aim of the present research was to determine the effectiveness of Patterned Breathing Technique on pain during the first stage of labour. Hence a quantitative research path was used for this study.

Research design
For the present study, Randomized Controlled Trail, Pre-test Post-test design was used.

VARIABLES
➢ **Independent variables –** Patterned Breathing Technique.

➢ **Dependent variables -** pain during the first stage of labor.

➢ **Demographic variables –** Age in the years, Religion, Education, Occupation, Family income per month, Areas of residence, Type of family.

RESEARCH SETTING
The Present study was conducted in selected District Women Hospital of Moradabad.

The rationale for selecting the particular setting was:
➢ Appropriate feasibility for conducting a study.

➢ The number of admissions in the hospitals.

➢ Administrative permission.

➢ Feasible as per time and access.

POPULATION
The population selected for the study consist of primigravida mothers those who are in the first stage of labour district, hospital of Moradabad. The data was collected retrospectively from records of these subjects.

Target population
The target population of the study was primigravida mothers with labour pain.

Accessible population
The accessible population in this study consist of primigravida mothers with labour pain those who are admitted in district women hospital, Moradabad.

SAMPLE
The sample for the present study was records of all primigravida mothers those who are in the first stage of labor in the selected district, hospital of Moradabad and those satisfied the sampling model.

SAMPLE SIZE
The sample size is the number of observation used for calculation and estimating the selected population.

In this study sample size is 52 primigravida mothers (26 in each experimental and control group) were selected who fulfillment the sampling criteria.

Formula used to calculate sample size was estimation proportion

$$ n = 2 \left[\frac{\left(z_1 - \alpha/2 + z_1 - \beta \right) s}{d} \right] $$

Z1-α/2 = Standard value (1.96)

Z1-β = Standard value (0.84)

D = Mean difference

S = Pooled SD

SAMPLING TECHNIQUE
Simple Random Sampling was recycled to choose the sample for the present research.

SAMPLING CRITERIA
Primigravida mothers those who are in the first stage of labour and who had encountered the following test were included in the study.

Inclusion criteria
➢ Primigravida mothers those who are in the first stage of labour.

➢ Mothers who are able to understand the Hindi language.

➢ Mothers who are ready to participate in the research.

Exclusion criteria
➢ Women who initiate labour before completing 36 weeks.

➢ Mothers who are severely ill.

➢ High-risk mothers eg. PIH, GDM

DATA COLLECTION TECHNIQUE AND TOOLS

Data collection was adopted to gather information from various sources. The data were collected over a period of 2 weeks from 19-11-2018 to 1-12-2018 in District Women Hospital, Moradabad after taking permission from the medical superintendent. The participants were made aware of the nature and purpose of the study. The participant was assured for confidentiality of their responses and written permission was being taken from the member. The sampling was chosen by utilizing the simple random sampling technique and the determined sampling was allotted to the experimental and control group randomly.

The aim of the study to evaluate the effectiveness of Patterned Breathing Technique on pain during the first stage of labour. Standardized Yazbek labour pain score is used for assessing the pain after taking written permission from Miss. Mariatha Yazbek, Ph.D. in Midwifery at the University of Pretoria and Demographic preforma was used to identify sample.

DESCRIPTION OF DATA COLLECTION INSTRUMENT

Tool 1- Demographic data
This tool was developed for the purpose of identifying the demographic characteristics of primigravida women who are in first stage of labour. A demographic data consist of seven items, It includes age, religion, education, occupation, family income per month, areas of residence, and types of family.

Tool 2- Yazbek labour pain score.
The Yazbek labour pain score is a 5 point score by observing myself reporting of pain scale from '0' be elected by one pain intense for(eg: no pain) to '10' be elected by the other pain intense.

0-No pain, **1-2** Mild pain,**3-4** Moderate pain,**5-6** Severe pain **7-8** Worst pain,**9-10** Unbearable pain.

REALIBILITY OF TOOL
Reliability is the consistency or dependency with which an instrument measures an attribute it is designed to measure (Polit and Black).

The tool was administered to 10 primi gravida women who are in first stage of labour and fulfill the inclusion criteria and available during data collection period. Reliability of tools was done to assess the internal consistency. The internal consistency was computed using interrater reliability and reliability coefficient was found for tool 1, that is demographic proforma ($r= 0.98$), tool 2, Yazbek labour pain score($r= 0.8$).The Internal consistency of the Yazbek labour pain score tool is 0.95 by using Cronbach's alpha method.

DATA COLLECTION PROCEDURE
Data collection was the assembly of guidance which addresses a research problem. Permission was taken from concerned authority of District Women Hospital for conducting the study prior to data collection. The subject was selected according to the selection criteria. Informed consent was obtained from each sample. Data were collected on 19 November to 1 December 2018. The investigator visited the district women hospital on the given date and was introduced to the primigravida mothers. Purpose of the study was to simplify among primigravida mothers and the privacy of their identity and response was assured in order to ensure their cooperation and prompt response. 52primigravida mothers were taken as a sample and 26 samples was equally distributed in experimental and control group. Yazbek labour pain score was used to assess the level of pain among primigravida mothers those who are having the first stage of labour pain in 45 minutes interval after giving intervention.

ETHICAL CONSIDERATION
The ethical clearance was obtained prior to the commencement of data collection and areas listed below:

➢ Prior permission was obtained from the Medical superintendent of District Women Hospital.

➢ Informed written consent was taken from each participant under the study. Objective of the study was maintained with honesty, privacy confidentiality and anonymity.

PLAN FOR DATA ANALYSIS
➢ Data analysis is systematic organization and synthesis of research data in quantitative studies the testing of hypotheses using those data (Pilot and Back, 2010).

➢ According to the objective, hypothesis of the study and opinion of the experts. It was explained to organize, tabulate, analyze and interpret the data by explanatory and presumed data. Data transferred directly to "SPSS" version 16. Descriptive and inferential statistics was used to analyze the data.

Following plan for data analysis established by the researcher.

➢ Frequency and percentage of demographical variables.

➢ Frequency and percentage distribution of primigravida mothers with level of pain.

➢ Paired t-test was done for comparison mean post-test of experimental group and mean post-test of a control group with labour pain score.

➢ Independent t-test was done for comparison of mean pretest and mean posttest labour pain score of the experimental group.

➢ Chi square was calculated to find the association between the level of pain on the first stage of labour and demographic variable regarding primigravida mothers. (Experimental group, post-test).

➢ Chi square was calculated to find the association between the level of pain during the first stage of labour and demographic variable among primigravida mothers. (Control group, Post-test).

➢ **Section 1: Description of the sample characteristics Performa.**

The demographic preforma has been used to collect the data from 52 primigravida mothers (26 each in experimental and control) regarding age, religion, education, occupation, family income per month, areas of residence, types of family. Frequency and percentage distribution were calculated for describing the sample characteristics of women who are in first stage of labour.

Table 2

➢ Frequency (f) and percentage (%) distribution of primigravida mothers by their age in the years in experimental group and control group.

➢ N(n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Age in the years				
18-22	7	26.9%	4	15.4%
23-26	14	53.8%	12	46.2%
27-30	5	19.2%	10	38.5%

Figure 4: Graphical representation of primigravida by their age
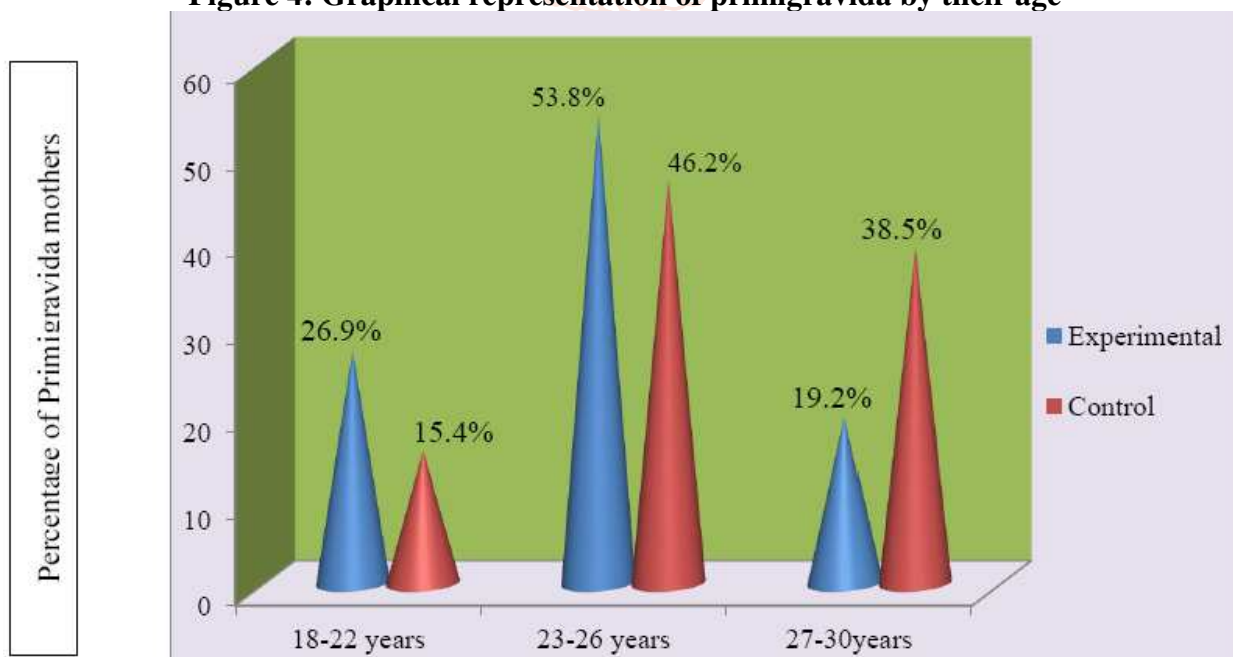

Figure 4: Cone diagram showing frequency and percentage distribution of primigravida mothers by their age in the years

➢ Table 2 and Figure 4depict frequency percentage distribution of primigravida mother according to their age in years. In experimental group majority of primigravida mothers, 14 (53.8%) were belongs to the category of 23-26 years, 7 (26.9%)are in 18-22 years age group and5 (19.2%)primigravida mothers were belongs to age group more than 27-30 years.

➢ In Control group, 12 (46.2%) of the primigravida mothers were in the age group of 23-26 years, 10 (38.5%) are in age group of 27-30 years, Whereas 4 (15.4%) primigravida mothers were belongs to age group of 18-22 years.

Table 3

➢ Frequency (f) and percentage (%) distribution of primigravida mothers by their religion in experimental group and control group.

➢ N(n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Religion				
Hindu	14	53.8%	15	57.7%
Muslim	10	38.5%	8	30.8%
Christian	2	7.7%	3	11.5%

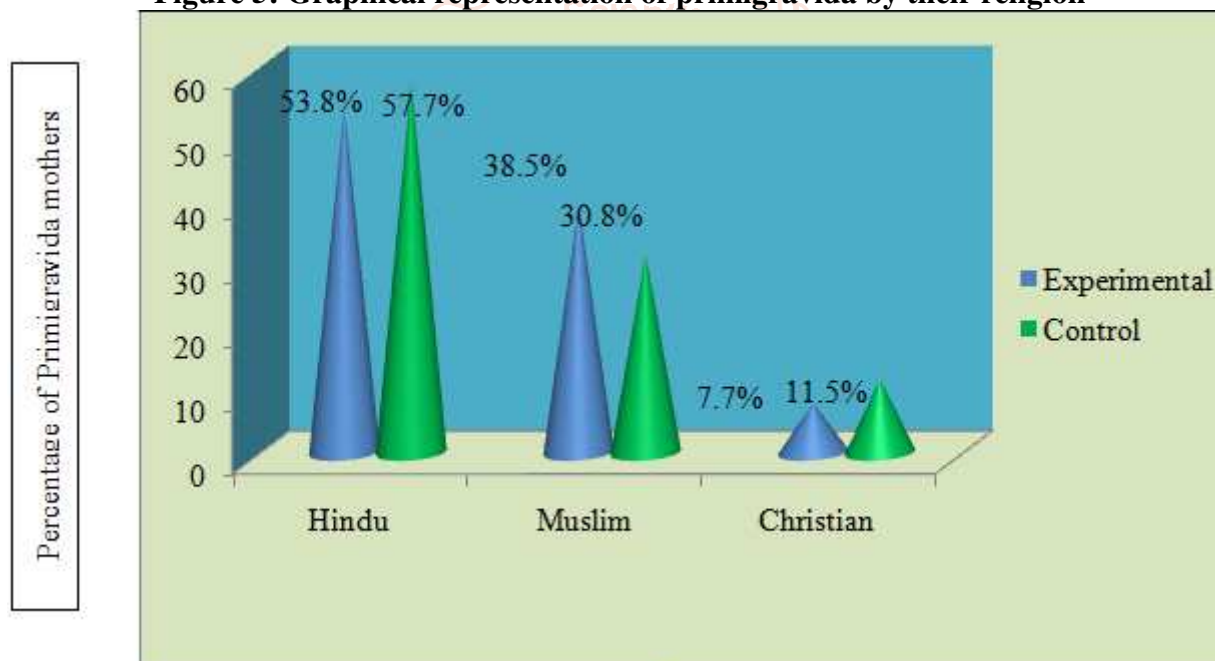**Figure 5: Graphical representation of primigravida by their religion**

Figure 5: Cone diagram showing frequency and percentage distribution of primigravida mothers by their religion

➢ Table 3 and Figure 5 depicts that in experimental group 14 (53.8%) of primigravida mothers belongs to Hindu religion, 10 (38.5%) of primigravida mothers belongs to Muslim religion and 2 (7.7%) of primigravida mothers belongs to Christian religion.

➢ In Control group, 15 (57.7%) of primigravida mothers belongs to Hindu religion, 8 (30.8%) of primigravida mothers belongs to Muslims religion and 3 (11.5%) of primigravida mothers belongs to Christian religion.

Table 4

➢ Frequency (f) and percentage (%) distribution of primigravida mothers by their education in experimental group and control group.

➢ N (n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Education				
No formal education	6	23.1%	2	7.7%
Primary education	10	38.5%	11	2.3%
High school	9	34.6%	12	6.2%
Graduate	1	3.8%	1	3.8%

Figure 6: Graphical representation of primigravida by their education
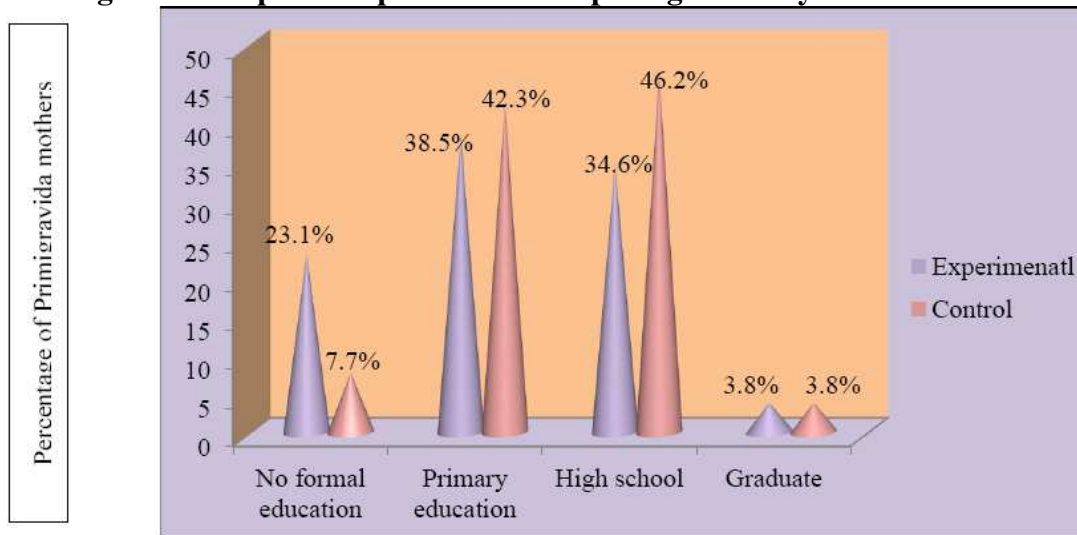

Figure 6: Cone diagram showing frequency and percentage distribution of primigravida mothers by their education

➢ Table 4 and Figure 6 depicts that in experimental group 10 (38.5%) of primigravida mothers having primary education, 9 (34.6%) of primigravida mothers having high school education, 6 (23.1%) of primigravida mothers having no formal education and 1 (3.8%) of primigravida mothers are graduate.

➢ In Control group, 12 (46.2%) of primigravida mothers having high school education, 11 (42.3%) of primigravida mothers having primary education, 2 (7.7%) of primigravida mothers having no formal education and 1 (3.85%) of primigravida mothers are graduate.

Table 5
➢ Frequency (f) and percentage (%) distribution of primigravida mothers by their occupation in experimental group and control group.

➢ N(n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Occupation				
Government employee	2	7.7%	5	19.2%
Private employee	2	7.7%	0	0%
Self employed	6	23.1%	4	15.4%
Home maker	16	61.5%	17	65.4%

Figure 7: Graphical representation of primigravida by their occupation
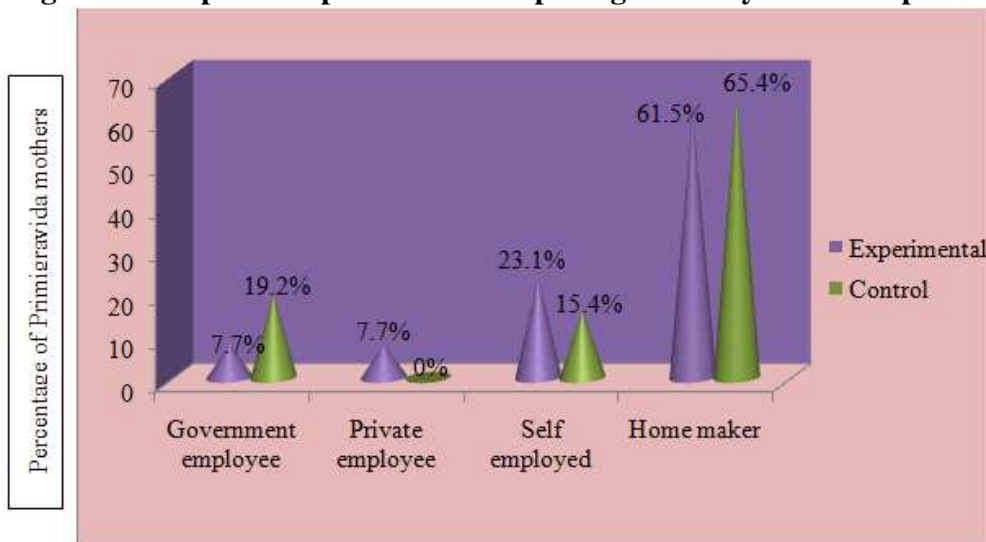

Figure 7: Cone diagram showing frequency and percentage distribution of primigravida. mothers by their occupation

➢ Table 5 and Figure 7 shows that in the experimental group most of the primigravida mothers, 16(61.5%) were home maker, 6 (23.1%) were self-employed and 2 (7.7%) were having both Government employee and Private employee.

➢ In control group most of the primigravida mothers i.e. 17 (65.4%) were home maker, 5 (19.2%) were government employee, 4 (15.4%) were self-employee.

Table 6
➢ Frequency (f) and percentage (%) distribution of primigravida mothers by their family income per month in experimental group and control group.
➢ N (n1+n2)=52

Demographic variable	Experimental group (n1=26)		Control group(n2=26)	
	f	%	f	%
Family income per month				
Below – 5000	15	57.7%	9	34.6%
5001-10,000	9	34.6%	13	50.0%
10,001-15,000	2	7.7%	4	15.4%

Figure 8: Graphical representation of primigravida by their family income per month
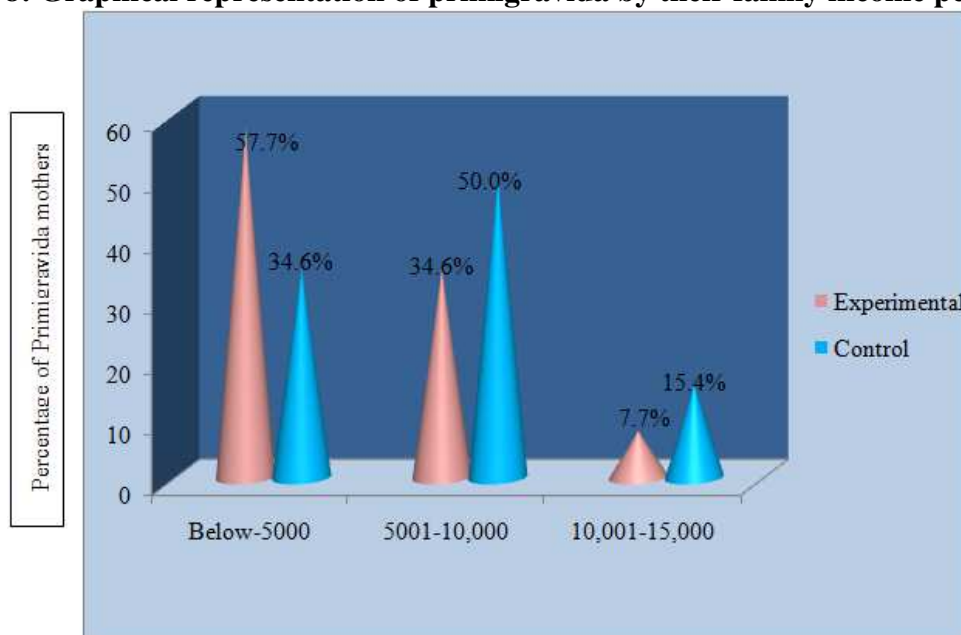

Figure 8: Cone diagram showing frequency and percentage distribution of primigravida mothers by their family income per month

- Table 6 and Figure 8 depicts that in experimental group 15 (57.7%) mother has family income below 5000 rupees, 9 (34.6%) mother income was 5001-10,000 rupees and 2 (7.7%) were having family income of 10,001- 15,000.

- In control group, most of primigravida mothers, 13(50.0%) family income was 5001-10,000 rupees, 9 (34.6%) mothers was 5000 rupees and 4 (15.4%) were having income of 10,001-15,000 rupees.

Table 7
- Frequency (f) and percentage (%) distribution of primigravida mothers by their areas of residence in experimental group and control group.

- N(n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Areas of residence				
Rural	11	42.3%	7	26.9%
Urban	15	57.7%	19	73.1%

Figure 9: Graphical representation of primigravida by their areas of residence
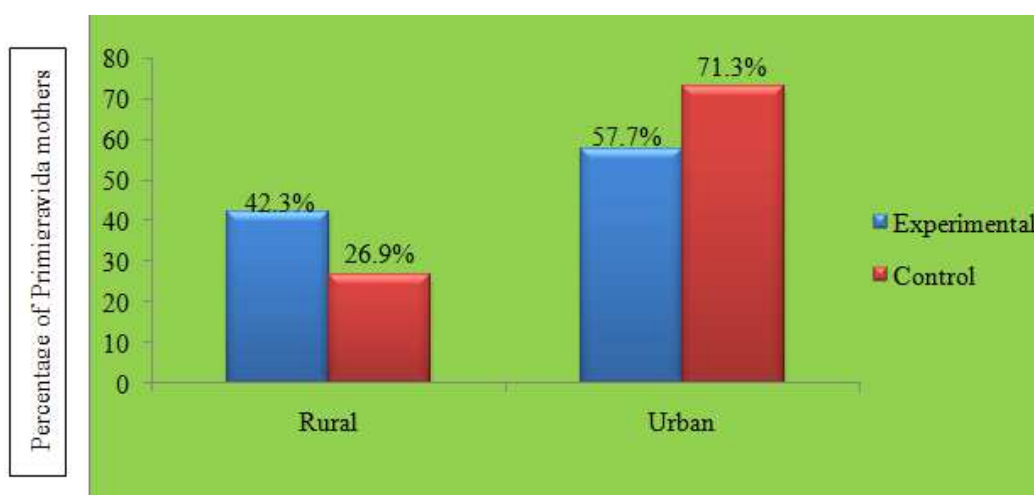

Figure 9: Column diagram showing frequency and percentage distribution of primigravida mothers by their areas of residence

- Table 7 and Figure 9 depicts that in experimental group 15 (57.7%) of primigravida mothers belongs from urban area and 11 (42.3%) of primigravida mothers are belongs from rural areas.

- In control group, 19 (73.1%) of primigravida mothers belongs to urban area and 7 (26.9%) of primigravida mothers belongs to rural area.

Table 8
- Frequency (f) and percentage (%) distribution of primigravida mothers by their types of family in experimental group and control group.

- N(n1+n2)=52

Demographic variable	Experimental group(n1=26)		Control group(n2=26)	
	f	%	f	%
Types of family				
Nuclear family	7	26.9%	7	26.9%
Joint family	17	65.4%	16	61.5%
Single parent family	2	7.7%	3	11.5%

Figure 10: Graphical representation of primigravida by their areas of residence
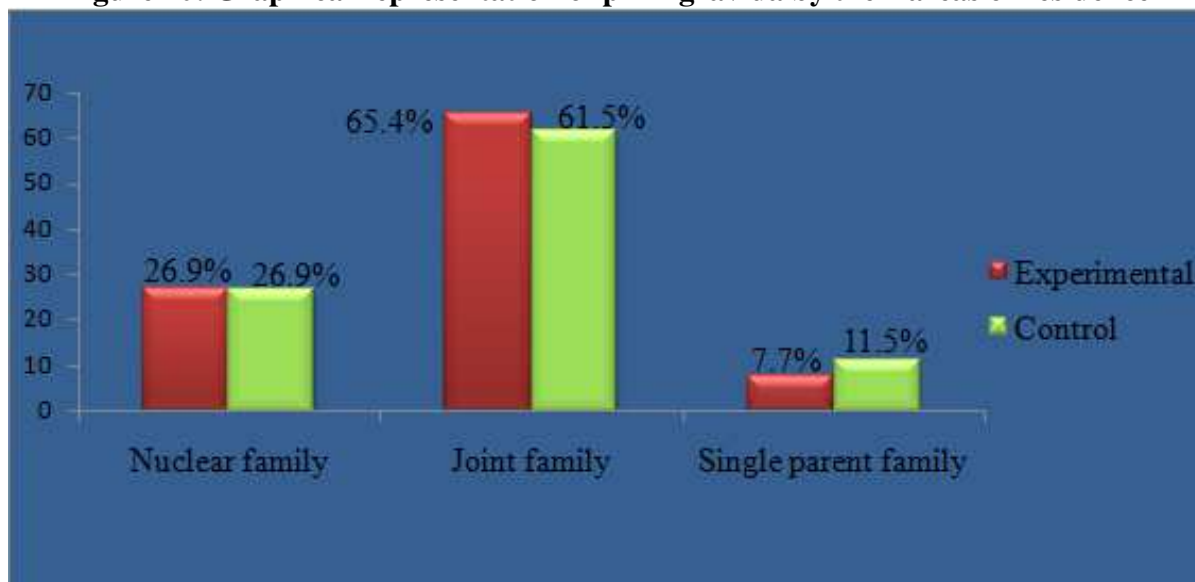

Figure 10: Column diagram showing frequency and percentage distribution of primigravida mothers by their types of family

➢ Table 8 and Figure 10 shows that in experimental group 17 (65.4%) of primigravida mothers belongs from joint family, 7 (26.9%) of primigravida mothers belongs to nuclear family and 2 (7.7%) of primigravida mothers belongs to single parent family.

➢ In control group, most of primigravida mothers that is 16 (61.5%) were belongs to joint family, 7 (26.9%) of primigravida mothers belongs to nuclear family and 3 (11.5%) were belongs to single parent family.

Section 2: The effectiveness of Patterned Breathing Technique on labour pain during first stage of labour among primigravida mothers.

➢ This section presents the level of pain among primigravida mothers before and after the intervention and effectiveness of Pattern Breathing Technique.

Section 2.1: Distribution of level of pain among primigravida mother.

➢ This section will describe level of pain among primigravida mothers in experimental and control group during first stage of labour

Table 9

➢ Frequency (f) and percentage (%) distribution of level of pain among primigravida mothers

➢ N (n1+n2)= 52

Observation	Category	No pain		Mild pain		Moderate pain		Severe pain		Worst pain		Unbearable pain	
		f	%	f	%	f	%	f	%	f	%	f	%
Pre test	Experimental	0	0	0	0	0	0	7	26.9	18	69.2	1	3.8
	Control	0	0	0	0	0	0	4	15.4	18	69.2	4	15.4
Post test	Experimental	0	0	4	15.4	22	84.6	0	0	0	0	0	0
	Control	0	0	0	0	0	0	7	26.9	19	73.1	0	0

Figure 11: Graphical representation of primigravida by their level of pain
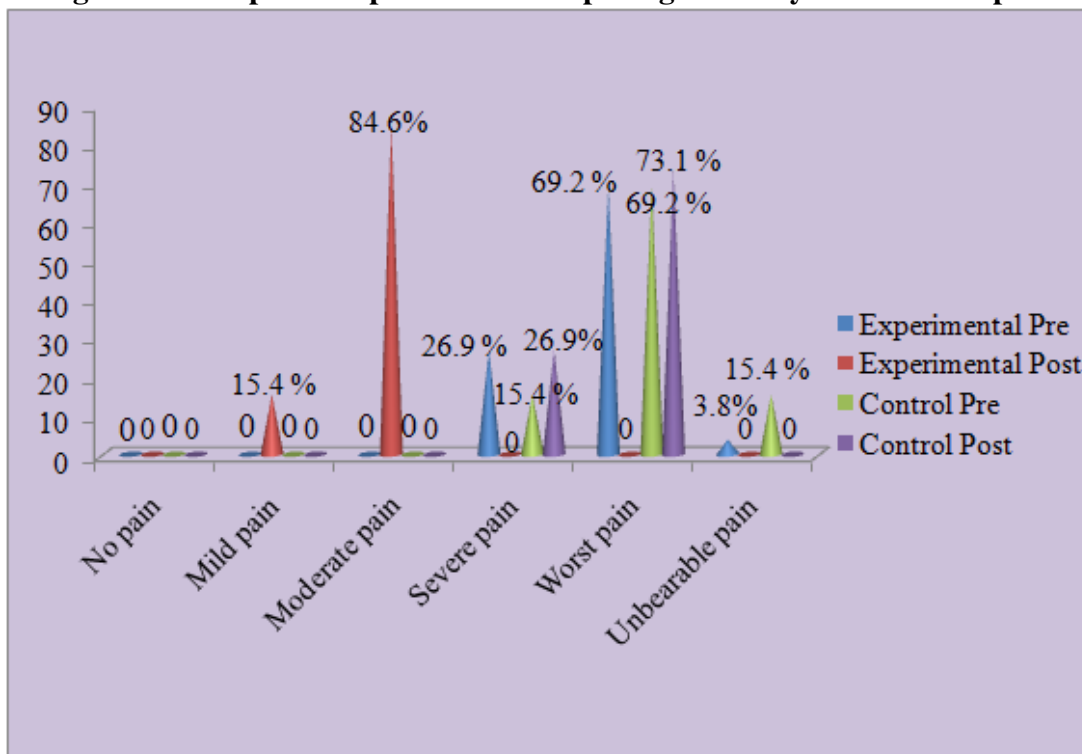

Figure 11: Cone diagram showing the percentage and distribution of level of pain among primigravida mothers

➢ Table 9 and Figure 11 shows that in experimental group of pre-test 18(69.2%) mothers was having worst pain, 7(26.9%) of mother has severe pain and 1(3.8%) of mother has unbearable pain. In control group 18(69.2%) of mother having worst pain, 4(15.4%) of mother has severe pain and 4(15.4%) of mother has unbearable pain.

➢ The result of post-test in experimental group, 22(84.6%) of mother having moderate pain and 4(15.4%) of mother had mild pain. In control group 19(73.1%) of mother had worst pain and 7(26.9%) of mother had severe pain.

Section 2.2: Comparison of post-test pain scores of primigravida mothers with labour pain in experimental and control group.
➢ This section will describe the mean difference of labour pain score after intervention. To determine the statistical significance independent 't' test was computed and following null hypotheses was checked.

➢ H01: There is no significant difference in pain after Patterned Breathing Technique during the first stage of labour among primigravida mothers.

Table 10
➢ Comparison of mean, standard deviation, mean difference and t value of level of pain among primigravida mothers of experimental and control group

➢ N (n1+n2)= 52

Post test	Mean ± SD	Mean difference	't' value (p value)
Experimental group	3.08 ± 0.62	3.7	17.3 (0.00)
Control group	6.81 ± 0.89		

➢ Table 10 reveals that the mean post-test pain score of experimental group 3.08±0.62 was lesser than the mean post test score of control group 6.81±0.89 with mean difference is 3.7 and p value is 0.00 hence it shows that Patterned Breathing Technique is effective in reducing labour pain of first stage of labour.

➢ The calculated; value was 't'=17.3 greater than the tabled value t(50) = 1.684.Hence the null hypothesis is rejected and inferred that there is a significance decrease in pain score in post-test of labour pain of experimental and control group.

Section 2.3: Comparison of mean pre-test and mean post-test of pain scores of primigravida mothers with labour pain in experimental group.

➢ This section will describe level of pain among primigravida mothers before and after the intervention. To determine the statistical significance paired 't' test was computed and following null hypotheses was checked.

➢ H01: There is no significant difference in pain after Patterned Breathing Technique during the first stage of labour among primigravida mothers.

Table 11

➢ Comparison of mean, standard deviation, mean difference and t value of level of pain among primigravida mothers of experimental group

➢ N= 26

Observation	Mean ± SD	Mean difference	't' value (p value)
Pre test	4.92 ± 0.56	1.84	9.3 (0.00)
Post test	3.08 ± 0.62		

➢ Table 11reveals that the mean pre-test pain score 4.92±0.56 of experimental group was grater than the mean post test score 3.08±0.62 with mean difference is of 1.84 and p value is 0.00.Hence it shows that Patterned Breathing Technique is effective in reducing labour pain of first stage of labour.

➢ The calculated value was 't'= 9.3 is greater than the table value t(25)= 1.708.Hence null hypothesis is rejected and inferred that there is significant decrease of pain score in post-test compared to that in pre-test, after Patterned Breathing Technique, so Patterned Breathing Technique is effective in reduction of pain on first stage of labour.

Section 3: Association between the level of pain during first stage of labour and demographic variable among primigravida mothers.

➢ Demographic character will be differentiating individual. This section will describe association between pain level with each demographic variable of experimental and control before giving the intervention.

Section 3.1: Association of demographic characteristic of primigravida mothers with labour pain in experimental group with pre-test pain score.

➢ This section will describe the association with demographic variable with level of pain among primigravida mother in experimental group before giving intervention.To determine the statistical significance chi square test was computed and following null hypotheses was checked.

➢ H02: There is no significant association between the level of pain during first stage of labour and the selected demographic variables among primigravida mothers.

Table 12

➢ Association of demographic characteristic of primigravida mothers with labour pain in experimental group with pre-test pain score.

➢ N= 26

Socio demographic Variables	Total number	Level of pain						P Value
		No pain	Mild pain	Moderate pain	Severe pain	Worst pain	Unbearable pain	
Age in the year								
18-22	7	0	0	0	2	5	0	0.25
23-26	14	0	0	0	2	9	3	
27-30	5	0	0	0	1	4	0	
Religion								
Hindu	14	0	0	0	3	8	3	0.44
Muslim	10	0	0	0	2	8	0	
Christian	2	0	0	0	0	2	0	
Socio demographic Variables	Total no	Level of pain						P Value
		No pain	Mild pain	Moderate pain	Severe pain	Worst pain	Unbearable pain	
Education								
No formal education	6	0	0	0	3	2	1	0.32
Primary education	10	0	0	0	2	7	1	
High school	9	0	0	0	0	8	1	
Graduate	1	0	0	0	0	1	0	
Occupation								
Government employee	2	0	0	0	0	2	0	0.50
Private employee	2	0	0	0	0	1	1	
Self employed	6	0	0	0	2	4	0	
Homemaker	16	0	0	0	3	11	2	
Socio demographic Variables	Total no	Level of pain						P Value
		No pain	Mild pain	Moderate pain	Severe pain	Worst pain	Unbearable pain	
Family income per month								
Below-5000	15	0	0	0	3	11	1	0.66
5001-10,000	9	0	0	0	2	5	2	
10,001-15,000	2	0	0	0	0	2	0	
Areas of residence								
Rural	11	0	0	0	2	7	2	0.66
Urban	15	0	0	0	3	11	1	
Types of family								
Nuclear family	7	0	0	0	1	5	1	0.87
Joint family	17	0	0	0	4	11	2	
Single parent	2	0	0	0	0	2	0	

> Table 12 depicted the association of demographic characteristic of primigravida mothers with labour pain pre-test pain score of experimental group. It shows that there is no significant association for age in the year, religion, education, occupation, family income per month, areas of residence and types of family with pre-test of experimental group hence, null hypothesis is accepted for this demographic variable.

Section 3.2: Association of demographic characteristic of primigravida mothers with labour pain in control group with pre-test pain score.
> This section will describe the association with demographic variable with level of pain among primigravida mother in control group before giving intervention. To determine the statistical significance chi square test was computed and following null hypotheses was checked.

➢ H02: There is no significant association between the level of pain during first stage of labour and the selected demographic variables among primigravida moth

DISCUSSION

➢ The findings of the study are discussed with reference to the objectives, assumption and with regard to findings of the studies.

Effectiveness of Patterned Breathing Technique on pain during first stage of labour among primigravida mothers.

Distribution of level of pain among primigravida mother

➢ In this present study, in experimental group pre-test 18 (69.2%) mothers were having worst pain, 7 (26.9%) of mother has severe pain and 1 (3.8%) of mother has unbearable pain and in control group 18 (69.2%) of mother having worst pain, 4 (15.4%) of mother has severe pain and 4 (15.4%) of mother has unbearable pain. The result of post-test in experimental group, 22 (84.6%) of mother having moderate pain and 4 (15.4%) mother had mild pain and in control group 19 (73.1%) of mother had worst pain and 7 (26.9%) of mother had severe pain.

➢ Above this finding was supported by a quasi-experimental study conducted by H N Ravindra et al. (2017) who reported in experimental group, first observation 20 (66.7%) having moderate pain and 10 (33.3%) having severe pain, in second observation 28 (93.4%) having moderate pain and 1(3.3%) each having mild and severe pain, in third observation 11 (36.7%) having mild pain, 19 (63.3%) having moderate pain. As look for control group, in first observation 14 (46.6%) having moderate pain and 16 (53.3%) are having severe pain, in second and third observation 3 (10%) having mild and 27 (90%) having severe pain.

➢ A quasi experimental study conducted by Ms. Anupriya, Mrs. Priyadarshani (2018) found that in post-test, experimental group 24 (80%) having no pain and only 6 (20%) are having mild pain whereas in control group, majority 23 (77%) are having mild pain, 1 (3%) was having moderate pain and 6 (20%) has severe pain.

➢ Another study was done by J Jayabharathi, R Sridevi (2017) found before implementing breathing exercise majority 9 (45%) had moderate pain, 7 (35%) had severe pain and 4 (20%) had mild pain but after implementation majority 11 (25%) had mild pain, 8 (40%) had moderate pain and only 1 (5%) had severe pain.

Comparison of post-test pain scores of primigravida mothers with labour pain in *experimental and control group*

➢ In this study, the mean post-test pain score of experimental group 3.08±0.62 was lesser than the mean post test score of control group 6.81±0.89 with mean difference is 3.7 and p value is 0.00.The calculated; value was 't'=17.3 greater than the tabled value t(50) = 1.684. Hence the study inferred that there is a significance decrease in pain score in post-test of labour pain of experimental and control group.

➢ These findings are supported by a study conducted by an experimental study conducted by L Sruthi reported that mean labour pain score in group I (Experimental) is 3.750 and in group II (Control) is 5.0950. The mean difference in group I was less than of group II with t value of 5.174 (P=<0.05) which suggest a significant reduction on pain score in group I and group II.

➢ Another study finding were supporting this study conducted by V M Anju, Pillai G Sreeja (2018), found that mean pre-test and post-test pain score among primiparturient in the experimental and control group, t value was 24.17, 35.17 (P=0.000), which replies significant difference in pain level.

Comparison of mean pre-test and mean post-test of pain scores of primigravida mothers with labour pain in experimental group.

➢ In this study the mean pre-test pain score 4.92±0.56 of experimental group was grater than the mean post test score 3.08±0.62 with mean difference is of 1.84 and p value is 0.00. Hence it shows that Patterned Breathing Technique is effective in reducing labour pain of first stage of labour. The calculated value was't'= 9.3 is greater than the table value t (25)= 1.708.

➢ Above findings was supported by a quasi-experimental study conducted by K Shilpa, S Muraleedharan (2018) found that there is a significant difference between mean pre-test score (28.15) and post-test scores (18.15) of primigravida parturient women received breathing exercise. Mean difference was 10, t= 23.522.

➢ Another experimental study was conducted by Jose E Keerthi (2012) shows that in experimental group mean score of pre and post-test is 14.09,

8.03 with a mean difference of 6.057. Paired "t" value (t= 35.895) indicates there is significant reduction of labour pain after intervention.

Association between the levels of pain with demographic characteristics during first stage of labour among primigravida mothers.

➤ In this study association of demographic characteristic of primigravida mother's pre-test labour pain of experimental and control group shows that there is no significant association for age in the year, religion, education, occupation, family income per month, areas of residence and types of family.

➤ Supporting with this findings one study conducted by L Sruthi (2013) found that there is no significant association of pain score of mother with selected demographic variable like age, education, occupation, family income, type of family, gestational age at 0.05 level of significance.

➤ Another study conducted by V M Anju, Pillai G Sreeja (2018) found that there is a significant association between pain score among primi parturient with education and monthly income (P<0.05).

CONCLUSION

Based on the findings and interpretation of the present study, the following conclusion was drawn that the Patterned Breathing Technique is an effective method to reduce labour pain in first stage of labour among primigravida mother.

RECOMMENDATIONS

The following recommendations are put forward as per the findings f the study:

➤ The similar study can be done in some different settings.

➤ A retrospective review can be done immediately after delivery to assess the pain level in second stage

➤ A comparative study can be done with Pattern Breathing Technique with other non-pharmacological method (Breathing exercise, Back massage, Meditation)

➤ A comparative study can be done with one group pharmacological method of pain relief with other group non-pharmacological method for pain relief.

➤ A replicable study can be done with a series of different post-test intervention.

➤ A study can be done for multigravida mother or elective Caesarean Section.

CONFLICT OF INTEREST: No
FINANCIAL SUPPORT: Self

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