

A Study to Assess the Effectiveness of Structured Teaching Program on Knowledge and Practice Regarding Pain Control Strategies During Labour Among Maternity Nurses in Selected Hospitals, Bangalore.

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Abstract

Comprehending pain experienced during labour proves to be a challenge to most nurses in charge of pregnant women during delivery. Pain experienced during labour arises from important physiological changes such as uterine contractions, pressure on the cervix, vagina, urethra, urinary bladder and rectum. These pain inducing processes are unavoidable as they are part of the delivery process and signs of progression of labour. In addition to these, there are many other pain intensifying factors such as stress, fear and anxiety depending on the subject's responses. However, appropriate techniques can be employed to minimize the perception of pain during labour. Nurses affect the ease of the process of childbirth significantly. Incorporating a structured teaching program (STP) to equip them with knowledge of pain control strategies could facilitate pregnant women in receiving better assistance. The main objective of this study was to incorporate a structured teaching program to educate nurses regarding pain control strategies during labour and to assess its effectiveness. A pre-experimental evaluative one-group pre-test-post-test design was followed to achieve the objectives of the study. Non probability purposive sampling technique was employed to select 60 samples from Unity Lifeline Hospital where a pilot study was conducted and main study was conducted at KCG hospital and Rajarajeshwari Medical College & Hospital. The study revealed that a majority of the nurses had inadequate knowledge and employed poor practices in the pre-test phase but gained a significant amount of knowledge and adopted better practices post-test.

Keywords— Structured teaching program, pain control strategies, Maternity nurses.

I. INTRODUCTION

Pain during labour cannot be generalized as the perception is different in each woman during each

pregnancy. It is a complex physiological and psychosocial phenomenon where a woman experiences inexplicable physical and emotional changes. Some women experience excruciating pain while others find it resembling their menstrual cramps. Studies reveal that women with negative attitude towards pain experienced stress, fear and anxiety which translated into increased labour pain [1]. Women with positive attitude towards pain showed more confidence and thus decreased pain perception was observed [2]. Primary breakthrough pain is the first phase where a woman requests for analgesia during which inhaled analgesics, parenteral opioids and epidural analgesia are given along with emotional support. Secondary breakthrough pain is the next phase where the analgesics used prior to this phase become ineffective [3]. Selected nursing interventions like breathing techniques, massage, birth positions and relaxation exercises can be administered to avert secondary breakthrough pain [4]. Nurses need to be equipped with sufficient knowledge to estimate levels of pain experienced during labour so that appropriate assistance is given to ease the process of labour. Studies reveal that only a tiny fraction of women give birth naturally with no pain medication whereas a majority of women lack proper assistance and are subjected to excruciating pain or cesarean section. Anesthesia related complications result in mortality in many cases and therefore tackling this sensitive issue is absolutely necessary [5].

A wide array of pharmacological and nonpharmacological pain relief measures is presently available to women in labour. Relaxation exercises, breathing techniques, positioning/movement, massage, hydrotherapy, hot/cold therapy, music, guided imagery, acupressure, and aromatherapy are some of the non-pharmacological pain relief measures women may initiate during labour to achieve an effective tolerance level. Clinical trials suggest that as labour progresses and contractions become stronger and more frequent; many women prefer medication to achieve pain relief. Epidural and spinal blocks temporarily

block pain in the lower body. An epidural can be used continuously throughout labor whereas a spinal block is typically used shortly before delivery. Alternatively, narcotics or other medications can be used to alter pain perception [6]. Both these approaches come with pros and cons. Pharmacological measures help in reducing the effects of pain but induce side effects such as drowsiness, nausea, itchiness and sometimes affecting the baby causing temporary breathing problems and slowed reflexes. On the other hand, non-pharmacological procedures help in relaxation and distraction but do not necessarily minimize pain [7].

Structured teaching program refers to systematically developed planned series of information regarding pain control strategies during labour carried out through lecture and demonstration with planned instructional aids such as flash cards, flip charts, posters & video clips. This study aims to assess the effectiveness of structured teaching program on knowledge and practice regarding pain control strategies during labour among staff nurses in selected hospitals, Bangalore. Primary objectives were to evaluate structured teaching program and assess the pre-test and post-test knowledge and practice among staff nurses regarding pain control strategies during labour, to determine the relationship between pre-test and post-test knowledge and practice scores regarding pain control strategies during labour among staff nurses and to identify the association between pre-test knowledge and practice regarding pain control strategies during labour among staff nurses with selected demographic variables.

This study serves as a validation for the improvement in assistance offered by nurses during labour. It involved a structured teaching program being addressed to the target population. On comparison of pre-test and post-test scenario, a favourable outcome was observed post-test.

II. MATERIALS AND METHODS

A. Setting of the Study

The study was conducted at K C General Hospital and Rajarajeshwari Medical College & Hospital in Bangalore. Nurses working in three shifts in maternity units in the aforementioned hospitals were 125 and 150 respectively. Different maternity units available in these hospitals were AnteNatal ward, PostNatal ward, obstetric ICU and labour room.

B. Study Population

Nurses working at the selected hospitals who fulfilled the inclusion and exclusion criteria were chosen. 60 samples were chosen by non-probability purposive sampling technique as per the following inclusion and exclusion criteria.

Inclusion criteria:

- Nurses who have completed diploma in General Nursing and Midwifery, B.Sc.(N), P.C B.Sc Nursing.

- Nurses belonging to female gender.
- Nurses who were engaging in direct maternity care at maternity unit.
- Nurses who were willing to participate in this study.
- Nurses who were available during the process of data collection

Exclusion criteria:

- Nurses belonging to other categories of work such as Nurse Administrator, ANM etc.
- Nurses belonging to male gender.
- Nurses who were not engaged in direct maternity care such as nurses working in operation theatre, medical & surgical ward etc.
- Nurses who were not willing to participate in this study.
- Nurses who were on leave during the process of data collection.

C. Variables under the Study

1) Dependent variable:

Level of knowledge and practice of maternity nurses regarding pain control strategies during labour.

2) Independent variable:

Structured teaching program on pain control strategies during labour

3) Extraneous variable:

Personal characteristics such as age, qualification, designation, year of experience in labour room, source of knowledge, clinical exposure with labour pain control methods, number of labour cases attended, marital status of nurses, parity, mode of delivery, individual experience with labour pain and pain control strategies adopted during their own labour.

4) STP : Structured Teaching Program

Development, validity and reliability of the tool

Important factors on which the STP was built were knowledge level of the sample, method of teaching to be adopted, simplicity of language and relevance of teaching. The components included in pain control strategies during labour were physiological basis, cause & events of labour pain, physical & psychological methods of non-pharmacological approach, systemic & regional methods of pharmacological approach.

Development of the tool involved review of literature, which provided adequate content, consultation with experts of Obstetric and Gynecological Nursing Specialty, Medical & OBG consultants, interaction with past investigators to obtain relevant data necessary to construct the tool on pain control strategies during labour.

Content validity of the tool was established by ten experts who comprised of eight nurse educators, two obstetricians and two anesthetists. Suggestions given by experts were incorporated in the tool and structured teaching programme was modified and finalized.

Reliability of the tool was established using split half method. Reliability coefficient of knowledge questionnaire was found to be $r = 0.86$ and reliability coefficient of practice scale was found to be $r = 0.83$ which indicated that the tool was reliable.

D. Proposed Plan for STP

Mode of instruction was lecture and demonstration. Group discussion was incorporated to allow exchange of views. Flash cards, flip charts, posters and video clips were considered appropriate for teaching aids. Evaluation of STP was conducted post-test after seven days of implementation of the teaching program.

E. Data Acquisition

Data was collected for a period of 4 weeks from 13th of December 2011 to 13th of January 2012. A structured questionnaire was selected for the study to evaluate the knowledge and practice among staff nurses working in selected hospitals. It was considered to be the most appropriate tool to elicit response from nurses. The structured questionnaire was designed with two parts with a total number of 62 items.

Part I consisted of 12 items pertaining to the demographic variables of the respondents such as age, qualification, designation, year of experience in labour room, source of knowledge, clinical exposure with labour pain control measures, number of labour cases attended, marital status of nurses, parity, mode of delivery, individual experience with labour pain and pain control strategies adopted during their own labour.

Part II consisted of 50 items on pain control strategies during labour. These 50 items were distributed under structured knowledge questionnaire and structured practice questionnaire.

F. Data Analysis and Interpretation

Personal data was analyzed in terms of frequency and percentage.

Knowledge and practice of maternity nurses regarding pain control strategies during labour was assessed before and after STP and analyzed in terms of frequency, percentage, mean and standard deviation.

Paired 't' test was used to test the significant difference between two means in pre-test and post-test analysis of knowledge and practice. Correlation coefficient 'r' value was used to find out the relationship between pre-test knowledge score and pre-test practice score and between post-test knowledge score and post-test practice score. Chi-square test was used to study the association between post-test level of knowledge and demographic variables and post-test level of skill and demographic variables.

Structured knowledge questionnaire- A total of 25 statements consisting of 15 positive statements and 10 negative statements were used for analysis. Each correct answer was given a score of one and a wrong answer was scored zero. The maximum score was 25

and the minimum was zero. The score was converted into percentage as follows.

$$\text{Percentage} = (\text{Obtained score} \times 100) / (\text{Total score})$$

Scores were interpreted as, <50% corresponds to inadequate knowledge, 51-75% corresponds to moderate knowledge and >76% corresponds to adequate knowledge.

Structured practice questionnaire- A total of 25 statements consisting of 13 positive statements and 12 negative statements were used for analysis. Each positive statement has been scored 3, 2 and 1 based on criteria (always, occasionally, never) respectively. Negative statement has been scored vice versa. Maximum score for each statement was 3 and minimum score was 1. Percentage was calculated and scores were interpreted as, <50% corresponds to poor practice, 51-75% corresponds to good practice and >76% corresponds to very good practice.

The content of the tool was validated by 12 experts and reliability was established by application of split half technique which measures the coefficient of internal consistency. The reliability of the half test was found using Karl Pearson's correlation by raw score method. Spearman Brown prophecy formula was used to find out the reliability of the complete test. The coefficient of correlation of level of knowledge and practice were found to be 0.83 and 0.81. Since the computed correlation of knowledge and practice score were high, the tool was found to be reliable.

G. Pilot Study

Pilot study was conducted at Unity life line Hospital from 01/12/11 to 06/12/11 to inspect the feasibility of the tool and study. Ten nurses who met the inclusion criteria were selected for the study. Pre-test was administered using structured knowledge questionnaire and structured practice rating scale followed by structured teaching program. After 7 days, post-test was administered using the same structured questionnaire and rating scale for evaluating the effectiveness of structured teaching program regarding pain control strategies during labour for knowledge and practice enhancement.

The application of t test at a level of 5% significance showed that the improvement in mean post-test score (85%) when compared to the mean pre-test score (42%) was significant. The findings of the pilot study accounted for the feasibility of the study.

H. Ethical Considerations

Permission to conduct the study was obtained from concerned authority. Written consent was obtained from all participants of the study after explaining the purpose and other details. The subjects were asked to maintain confidentiality of the data obtained and about the proceedings of the structured teaching program. The subjects were informed that

their participation was voluntary and they were free to drop out anytime.

III. RESULTS

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A. Hypothesis Testing

The study developed the following hypotheses to be tested upon interpretation of results of the study.

- Mean post-test knowledge and practice score of maternity nurses who had structured teaching programme regarding pain control strategies during labour is significantly higher than the mean pre-test knowledge score.
- There is a significant relationship between pre-test knowledge score and pre-test practice score and post-test knowledge score and post-test practice score among maternity nurses who received structured teaching programme regarding pain control strategies during labour.
- There is a significant association between post-test knowledge and practice score of maternity nurses regarding pain control strategies during labour with selected demographic variables.

TABLE I
Comparison between pre and post-test knowledge regarding pain control strategies during labour among maternity nurses

Level of knowledge	Pre-test		Post-test	
	Frequency	%	Frequency	%
Inadequate (<50%)	51	85	0	0
Moderate (51--74%)	9	15	10	16.67
Adequate (>75%)	0	0	50	83.33

Note. n=60

TABLE III
Comparison of pre-test and post-test practice regarding pain control strategies during labour among maternity nurses

Level of practice	Pre-test		Post-test	
	Frequency	%	Frequency	%
Poor (<50%)	53	88.33	0	0

Good (50--75%)	7	11.67	47	78.33
Very good (>75%)	0	0	13	21.67

Note. n=60

Comparing pre-test and post-test knowledge of staff nurses 83.33% of them gained adequate knowledge post-test whereas none of them had adequate knowledge pre-test. About the same number of people exhibited moderate knowledge pre-test and post-test. Also, about 85% of them exhibited inadequate knowledge pre-test and none of them exhibited inadequate knowledge post-test. Based on the data obtained, there is a significant increase in the number of subjects adopting good practices post-test whereas nurses adopting poor practices decreased from 88.33% pre-test to nil post-test. 21.67% of them showed significant improvement and adopted very good practices post-test.

B. Statistical Analysis

TABLE IIIII
Evaluation of structured teaching programme on knowledge regarding pain control strategies during labour among maternity nurses with statistical significance

Aspects wise on Labor pain	Enhancement			Paired 't' test
	Mean	SD	Mean%	
Physiological basis	2	0.86	66.67	17.9**
Causes and events	1.13	0.9	37.67	9.5**
Physical method	2.3	1.54	46.00	11.5**
Psychological method	2.86	1.01	57.20	21.8**
Systemic analgesia	1.9	1	47.50	14.6**
Regional analgesia	3.48	0.98	69.60	27.5*
Overall	13.67	3.34	54.68	31.5**

**S- Significant at p<0.01 level, df 59

On comparison of pre-test and post-test knowledge, all the aspects of pharmacological and non-pharmacological pain control strategies showed a significant increase, where the overall 't' was 31.5 which was significant at 0.01 level with df 59.

TABLE IV
Comparison between pre-test knowledge and practice scores and post-test knowledge and practice scores regarding pain control strategies during labour

Parameter	Pre-test				Post-test			
	Mean	SD	Mean %	Correlation 'r' value	Mean	SD	Mean %	Correlation 'r' value
Knowledge	7.89	7.85	31.56	0.21 N.S	21.56	2.49	86.24	0.47* S
Practice	17.98	9.18	23.97		45.96	6.66	61.28	

N.S- Not significant at p>0.05 level

Correlation between pre-test knowledge and practice gives the correlation coefficient computed between the overall mean knowledge and overall mean practice of staff nurses as r =0.21* was found not significant at p<0.05 level. Hence it suggests that there is a linear (positive) correlation between knowledge and practice regarding pain control strategies during labour but it is not significant at

p>0.05 level. Correlation coefficient computed between overall mean knowledge and overall mean practice of staff nurses post-test as r =0.47* was found to be significant at p<0.01 level. Hence it suggests that there is a linear (positive) correlation between knowledge and practice regarding pain control strategies during labour.

TABLE V
Relationship between pre-test knowledge of maternity nurses and selected demographic variables

Sl. no	Demographic variables	No	%	Level of Knowledge				Chi square
				< Median (27)		≥ Median (33)		
				No	%	No	%	
1	Age							
	a. Below 23 years	8	13.34	5	18.5	3	9.1	9.3*
	b. 23--35 Years	35	58.33	10	37.0	25	75.8	df 2
	c. Above 35 Years	17	28.33	12	44.4	5	15.2	S
2	Qualification							
	a. GNM	44	73.33	19	70.4	25	75.8	0.5
	b. B.Sc Nursing	11	18.33	6	22.2	5	15.2	df 2
	c. P.C. B.Sc Nursing	5	8.34	2	7.4	3	9.1	N.S
3	Designation							
	a. Junior Nurses	25	41.67	17	63.0	8	24.2	10.7*
	b. Senior Nurses	18	30.00	7	25.9	11	33.3	df 2
	c. Nurse Incharge	17	28.33	3	11.1	14	42.4	S
4	Year of experience in labour room							
	a. Below 6 years	24	40.00	14	51.9	10	30.3	3,2
	b. 6--10 years	20	33.33	8	29.6	12	36.4	df 2
	c. Above 10 years	16	26.67	5	18.5	11	33.3	N.S
5	Source of knowledge							
	a. In Service education	31	51.67	15	55.6	16	48.5	1.8
	b. Web - Based studies (Internet)	13	21.67	7	25.9	6	18.2	df 2
	c. Journals and magazines	16	26.66	5	18.5	11	33.3	N.S
6	Clinical exposure with labour pain control measures							

	a. Systemic and Regional analgesics and anesthetics	48	80.0	22	81.5	26	78.8	0.6
	b. Physical & psychological supportive methods	0	0.0	0	0.0	0	0.0	df 1
	c. Both	12	20.0	5	18.5	7	21.2	N.S
7	Number of labour cases attended							
	a. Below 100	14	23.34	9	33.3	5	15.2	2.9
	b. 100—200	29	48.33	12	44.4	17	51.5	df 2
	c. Above 200	17	28.33	6	22.2	11	33.3	N.S
8	Marital Status							
	a. Married	38	63.33	16	59.3	22	66.7	0.4
	b. Unmarried	22	36.67	11	40.7	11	33.3	df 1
	c. Nuns	0	0.00	0	0.0	0	0.0	N.S
9 a	If married, number of parity							
	a. One	17	44.74	10	50.0	7	38.9	1.16
	b. Two	15	39.47	8	40.0	7	38.9	df 2
	c. More than two	6	15.79	2	10.0	4	22.2	N.S
9 b	Mode of delivery							
	a. Vaginal	22	57.89	14	70.0	8	44.4	2.87
	b. Instrumental	4	10.53	2	10.0	2	11.1	df 2
	c. LSCS	12	31.58	4	20.0	8	44.4	N.S
10 a.	If vaginal or instrumental delivery, individual experience with labour pain							
	a. Severe	9	34.62	5	55.6	4	23.5	8.5*
	b. Tolerable	2	7.69	2	22.2	0	0.0	df 2
	c. Intolerable	15	57.69	2	22.2	13	76.5	S
10 b	Pain control strategies adopted during vaginal or instrumental delivery							
	a. Pharmacological	22	84.62	7	77.8	15	88.2	0.5
	b. Non Pharmacological	0	0.00	0	0.0	0	0.0	df 1
	c. Both	4	15.38	2	22.2	2	11.8	N.S

N.S- Not Significant *S- Significant at p<0.05 level

The table shows that there is a significant association of knowledge scores with demographic variables such as age, designation and individual experience with labour at the p< 0.05 level with pain control measures during labour. However qualification,

year of experience, source of knowledge, clinical exposure with labour pain, number of labour cases attended, marital status, number of parity, mode of delivery and pain control strategies adopted during labour were not significant at 0.05 level.

TABLE VI
Relationship between pre-test practice of nurses and selected demographic variable

Sl.no	Demographic variables	No	%	Level of Practice				Chi square
				< Median (25)		≥ Median (35)		
				No	%	No	%	
1	Age							
	a. Below 23 years	8	13.34	4	14.8	4	12.1	9.7*
	b. 23--35 Years	35	58.33	9	33.3	26	78.8	df 2
	c. Above 35 Years	17	28.33	12	44.4	5	15.2	S
2	Qualification							
	a. GNM	44	73.33	15	55.6	29	87.9	3.9
	b. B.Sc Nursing	11	18.33	7	25.9	4	12.1	df 2

	c. P.B. B.Sc Nursing	5	8.34	3	11.1	2	6.1	N.S
3	Designation							
	a. Junior Nurses	25	41.67	14	51.9	11	33.3	8.8*
	b. Senior Nurses	18	30.00	9	33.3	9	27.3	df 2
	c. Nurse Incharge	17	28.33	2	7.4	15	45.5	S
4	Year of experience in Labour room							
	a. Below 6 years	24	40.00	12	44.4	12	36.4	2.6
	b. 6--10 years	20	33.33	9	33.3	11	33.3	df 2
	c. Above 10 years	16	26.67	4	14.8	12	36.4	N.S
5	Source of knowledge							
	a. In Service education	31	51.67	13	48.1	18	54.5	3.9
	b. Web - Based studies (Internet)	13	21.67	8	29.6	5	15.2	df 2
	c. Journals and magazines	16	26.66	4	14.8	12	36.4	N.S
6	Clinical exposure with labour pain control measures							
	a.Systemic and Regional analgesics and anesthetics	48	80.0	21	77.8	27	81.8	0.5
	b.Physical & psychological supportive methods	0	0.0	0	0.0	0	0.0	df 1
	c. Both	12	20.0	4	14.8	8	24.2	N.S
7	Number of labour cases attended							
	a. Below 100	14	23.34	7	25.9	7	21.2	0.67
	b. 100—200	29	48.33	11	40.7	18	54.5	df 2
	c. Above 200	17	28.33	7	25.9	10	30.3	N.S
8	Marital Status							
	a. Married	38	63.33	13	48.1	25	75.8	2.3
	b. Unmarried	22	36.67	12	44.4	10	30.3	df 1
	c. Nuns	0	0.00	0	0.0	0	0.0	N.S
9 a	If married number of parity							
	a. One	17	44.74	8	47.1	9	42.9	0.38
	b. Two	15	39.47	7	41.2	8	38.1	df 2
	c. More than two	6	15.79	2	11.8	4	19.0	N.S
9 b	If Parity mode of delivery							
	a. Vaginal	22	57.89	14	82.4	8	38.1	7.6*
	b. Instrumental	4	10.53	1	5.9	3	14.3	df 2
	c. LSCS	12	31.58	2	11.8	10	47.6	S
10 a	If vaginal or instrumental delivery, individual experience with labour pain							
	a. Severe	9	34.62	4	33.3	5	35.7	2.5
	b. Tolerable	2	7.69	2	16.7	0	0.0	df 2
	c. Intolerable	15	57.69	6	50.0	9	64.3	N.S
10 b	Pain control strategies adopted during vaginal or instrumental delivery							
	a. Pharmacological	22	84.62	9	75.0	13	92.9	1.58
	b. Non Pharmacological	0	0.00	0	0.0	0	0.0	df 1
	c. Both	4	15.38	3	25.0	1	7.1	N.S

N.S- Not Significant *S- Significant at $p < 0.05$ level

The table shows that there is a significant association of practice scores with demographic variables such as age, designation and mode of delivery at the $p < 0.05$ level with pain control measures during labour. However qualification, year of experience, source of knowledge, clinical exposure with labour pain, number of labour cases attended, marital status, number of parity, individual exposure with labour pain and pain control strategies adopted during labour were not significant at 0.05 level.

IV.DISCUSSION

Studies in the past reveal a great deal of information regarding women's requirements regarding labour care. A qualitative study was conducted in the United States to learn from pregnant women about their expectations from an intrapartum labour and birth nurse. The results of the study revealed that the majority of pregnant women expected their labour nurse to provide physical

comfort as well as emotional support along with routine nursing care [8].

A descriptive study of labour pain suggests that a woman's confidence in her ability to cope with labour contributes significantly to her perception of pain during labour. Self-efficacy theory is examined as a framework for evaluating women's confidence in their ability to cope with labour [9].

A descriptive study revealed about the use of patient-controlled epidural analgesia for labour. Patient-controlled epidural analgesia (PCEA) for labour was introduced into clinical practice 20 years ago. The PCEA technique has shown to have significant benefits when compared with continuous epidural infusion. A continuous background infusion improved maternal analgesia and reduced unscheduled clinician interventions. Larger bolus doses (more than 5 mL) may provide better analgesia compared with small boluses. Low concentrations of bupivacaine or ropivacaine provide excellent analgesia without significant motor block. Many strategies with PCEA can provide effective labour analgesia. High volume, dilute local anesthetic solutions with a continuous background infusion appear to be the most successful strategy [10].

A descriptive study focused on the effect of psychological care environments on the disclosure practices of nurse midwives relative to methods of pain management in childbirth. A multivariable model of characteristics in the nurse-patient relationship that influence the disclosure practices of nurses was developed to investigate the effects that the characteristics of the nurse midwife, the patient, and the setting have on the disclosure practices reported by nurse midwives. Data was collected by a mailed questionnaire using multiple choice questions and patient case studies. The questionnaire was sent to a random sample of 500 certified nurse midwives. No association occurred between variations in patient characteristics and the content disclosed by nurse midwives. Many of the patient demographic characteristics were observed to be significantly related to the method and time of disclosure. Results of the study suggested that the psychological factors as well as the immediate health-care environment influenced the disclosure of information [11].

The present study is consistent with the findings of another study which was conducted by Akbas M, Oztunç G and examined the knowledge and nursing practice to deal with labour pain at Cukurova hospital on 2008 and found out 52.0% did not have experience with labour pain, 42.4% stated that they frequently encountered patients in pain, 70.2% had received education about pain, 88.4% had not received education about pain and did not read about pain in journals, 88.9% used pharmacologic management, 85.4% evaluated patients' pain based on verbal statements, 96.5% knew the importance of opioid analgesics, and 3% knew regarding pain theory. As a result of this study, it is seen that nurses have

inadequate knowledge about pain control methods. After evaluation of the conclusions, they would be undergoing an education programme to increase the quality of the nursing care [12].

The present study is also consistent with the findings of the study conducted by Zwelling E Johnson & K Allen J. They investigated the relationships between the knowledge of pain about labour with nine predictor variables such as age, parity, childbirth preparation, anxiety and confidence in ability to handle labour, concern regarding the outcome of labour, fear of pain, cervical dilatation and frequency of uterine contractions. The sample included 134 low-risk women at term with a normal singleton pregnancy. Standard and stepwise regression was used to examine the ability of the selected variables to explain the variance in the sensory, affective, and evaluative components of pain as measured by the subscales of the Pain Rating Index of the McGill Pain Questionnaire. There is a significant association of knowledge scores with demographic variables such as age, parity, childbirth preparation, and Individual experience with labour at the $p < 0.05$ level with pain control measures during labour [13]

The study is consistent with the findings of the study conducted by Hug J Chattopadhyay C, Mitra G R, Karmahapatra R M and Schneider M C about Nurse Midwives and birth related experiences. A survey of women nurses of mixed parity was conducted at Calcutta in India. It was found that there is an imbalance between maternal expectations and provision of labour pain services. Structured interviews based on a questionnaire were conducted with 205 female nurses. The majority of the 205 women nurses were nulliparous (71%); the average previous cesarean section rate among the parous minority (29%) was 38.8%. Expectation of labour pain was very common. In the absence of an idea of its severity (78%), a majority were ready to tolerate it as a natural phenomenon (71%). For most interviewees, information about combined spinal epidural labour analgesia was new (97%), although they were prepared to ask for effective pain relief (98%) and pay attention towards epidural analgesia, if available (95%). Nearly a quarter (24%) of the subjects considered cesarean section as an option to avoid labour pain, while most (99%) perceived cesarean section to be safer for the baby than vaginal delivery. The study identified that women nurses' clinical experience may have an impact on labour pain control methods with elected demographic variables [14].

V. CONCLUSION

The present study validates the fact that most maternity nurses possessed inadequate knowledge and employed poor practices pre-test. Designing a structured teaching program to equip nurses with adequate knowledge proved to be an effective solution. The study establishes the fact that a structured

teaching program could significantly improve the assistance provided by nurses during labour. Although the study proves to be effective, it does have the following limitations:

- The study was limited to the samples from the selected hospitals.
- The sample size was small, hence generalization must be done with caution.

Recommendations for future research are-conducting studies with larger sample sizes involving true, quasi experimental & descriptive design, assessing the knowledge, attitude and practice of midwives on current non pharmacological techniques such as birth ball, birth stool and water birth for pain reduction and assessing the knowledge, attitude and practice of midwives on current pharmacological techniques such as patient controlled epidural analgesia, combined spinal epidural analgesia and anesthesia for effective labour pain management

REFERENCES

- [1] Waldenstrom U, Bergman V, Vasell G: "The complexity of labor pain: Experiences of 278 Women". J ObstetGynecol , vol. 17, pp. 215-228, 2006.
- [2] Green J M, Baston H A. "Feeling in control during labor-concepts, correlates, and Consequences". Birth, vol. 30, pp. 235-247,2003.
- [3] Mi-Tec Medical Publishing report. "Pain relief during childbirth". J Austra society Anesth, vol. 10(2), pp. 12-19, 2009.
- [4] Jayabharathi B. "Effective nursing interventions on pain during labor". Nurs J India., vol. 6(2), pp. 14-16, 2010.
- [5] Kuczkowski K M. "Anesthetic management of labor pain: what does an obstetrician need to know?" Arch Gynecol Obstet, vol. 271(2), pp. 97-103, 2005.
- [6] National survey results:Department of Health. Epidural analgesia practices for labor, Ireland:The Institute, 2005.
- [7] Chaney J. "Birthing in early America". Am J Nurse midwifery, vol. 25(5), pp. 5, 2005.
- [8] Tumlin. H, Simkin P. "Update on nonpharmacologic approaches to relieve labor pain and prevent suffering". J MidwifWomens Health, vol. 49(6), pp. 489-504, 2006.
- [9] Lowe N K."The pain and discomfort of labor and birth". J obstetGynecol neonatal nurs, vol. 25(1), pp. 82-92, 2006.
- [10] Halpern S H, Carvalho B. "Use of Patient-controlled epidural analgesia for labor". J ObstetAnesth, vol. 21 (3), pp. 32-45, 2009
- [11] Trandel-Korenchuk D M.(). "The effect of psychological care environments on the disclosure practices of nurse midwives relative to methods of pain management in childbirth: a survey of UK practice". J Complement TherNurs Midwifery; vol. 12(2), pp. 112-119, 2008.
- [12] Akbaş M, Öztunç G. "Examination of knowledge about nursing interventions for the care of patients in pain at Cukurova hospital". Pain ManagNurs, vol. 9(3), pp. 88-95, 2008.
- [13] Zwelling E, Johnson K, Allen J.."Knowledge of pain about labour with nine predictor variables". Am J Matern Child Nurs, vol. ;31(6), pp. 364-70, 2006.
- [14] Hug I, Chattopadhyay C, Mitra G R, Karmahapatra R M. "Nurse midwives and birth-related experiences". Int J ObstetAnesth, vol. 17(2), pp. 112-7, 2008.