



NON PHARMACOLOGICAL PAIN MANAGEMENT TECHNIQUES DURING FIRST STAGE OF LABOUR

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ABSTRACT

A Pre-experimental study to assess the effectiveness of self-instructional module on knowledge and attitude regarding non-pharmacological pain management techniques during first stage of labour among staff nurses working in selected hospital at Gorakhpur, U.P, 2011. The study was conducted on 60 staff nurses. Conceptual framework for the study was adopted from Simple Theory: Roy's Adoption model. The research design of the study was one group pre-test and post-test research design. The study was conducted in Dufferin Hospital & Railway Hospital at Gorakhpur. Non-probability convenient sampling techniques were used to select the subjects which included a sample 60 staff nurses. The data collected by structured questionnaire developed to assess the knowledge and attitude on non-pharmacological pain management techniques during first stage of labour and the tool validated by 5 nursing personnel and 2 medical personnel. Reliability coefficient was calculated by test and retest method. Data collection was done in month of 1st – 15th April 2011. The data has been analyzed by using both descriptive and inferential statistics. Descriptive statistics, calculation of percentage, mean, median, standard deviation and inferential statistics- t-test, Z-test, chi-square test was used.

Results

- The mean score of subjects obtained for overall level of knowledge in pre-test was 13.53 and for the post-test were 23.80.
- The improved mean score for overall level of knowledge was 10.27 with Z test value 13.84 which is highly significant at $p < 0.001$.
- The mean score of subjects obtained for overall level of attitude in pre-test was 40.37 and for the post-test were 45.37.
- The improved mean score for overall level of attitude was 5.11 with Z test value 7.81 which is highly significant at $p < 0.001$.



Interpretation and conclusion

- The overall level of knowledge and attitude among staff nurses in the pre-test revealed that majority 36 (60%) and 38(66.33%) of them had inadequate knowledge and have positive attitude.
- The overall level of knowledge and Attitude among staff nurses in the post-test revealed that majority 26 (43.33%) and 48(80%) of them had adequate knowledge and positive attitude.
- This indicates that the self-instructional module on non-pharmacological pain management techniques during first stage of labour administered by the investigator was effective.
- The association between post-test and pre Test levels of knowledge among staff nurses with the demographic variables using the chi-square test revealed that, there was no significant association.

To increase the child birth experience among the laboring women there is a great need for extensive and intensive research in this area of non-pharmacological pain management techniques during first stage of labour to determine alternative teaching strategies to assess the knowledge and attitude off the staff nurses.

Key words: non-pharmacological pain management techniques during first stage of labour, knowledge and attitude, self-instructional module.

1. INTRODUCTION

Background and significance of the study

Life transition involves the human experience of moving from one phases of life to another. There is a sense of the loss for the old ways, fear of the unknown anxiety and frustration with new ways.

Labour is the natural process which takes place 282 days after conception. During this process, the baby placenta and placental membranes are expelled through the vagina (birth canal).

Child birth causes physical and mental changes to pregnant women when child birth approaching. During labour, the uterine contraction leads to the dilatation of the cervix and vagina and the retraction of the tendon and membranes in the surrounding area, causing pain which stars as soon as the first stage of labour begins and the pain increases as the women enters the second stage of labour.

The Taxonomy Committee of the International Association for the Study of Pain (IASP) 1986

attributed a concept to the word pain as a sensorial, emotionally unpleasant experience, associating it to actual or potential tissue lesions. It is involved by unpleasant, subjective sensations and each individual uses the word in accordance with his/her previous experiences, in a certain way representing an emotional experiment. In this context, we understand that labour pains involve emotional, sensorial, environmental and existential factors.



Thus, an important task to help women in regular child birth to bear the pain is through humanized support and approach, identifying its quantitative and qualitative aspects, for the systematic planning of information and soothing orientation provided by health care professionals or other people who assist these women.

Pregnant women who have inexperience giving birth and who have misconception and misunderstanding of labour tend to have fear and anxiety. Even though delivery is a natural phenomenon, it has been demonstrated that the accompanying pain is considered severe or extreme in more than half of cases. Besides conventional approaches, such as epidural analgesia, many complementary or alternative non-pharmacological methods have been reported to reduce pain during labour and delivery. Complementary or Alternative Medicine or non-pharmacological methods can be defined as theories or practices that are not part of the dominant or conventional medical system.

An appreciation of each woman's unique experience of pain is possible when perinatal nurses understand the physiological basis of pain, physiological responses to pain, and psychosocial factors influencing pain perception. As fear and anxiety heighten, muscle tension increases, inhibiting the effectiveness of contractions, increasing discomfort and further heightening fear and anxiety. Non-pharmacological and pharmacological pain management strategies provide women with specific techniques they can use to cope with the discomfort of labour, thereby increasing their feelings of control with help of coping person i.e labour room nurse.

Need of the study:

Studies have revealed that there are a number of non-pharmacological methods which can help a woman to relax during contractions. The breathing techniques, massage, and positioning are also widely used ways of handling the discomfort. In brief, pain is an important problem that pregnant women have to cope with during labour, when they are in pain and they are unable to control their pain and suffering, pregnant women will develop a negative idea about and dissatisfaction with labour.

Report have indicated that pregnant women who had undergone preparation will have a shorter laboring period more appropriate pain coping behaviors during labour, a positive attitude towards labour, babies whose Apgar score are higher, a better maternal infant relationship and satisfaction with child birth experience.

Although the nurse's are the one who will be always present in the labour room with the laboring women in Indian setting of childbirth, So it is very essential for the nurses to have knowledge regarding the non-pharmacological pain management during the first stage of labour, to help the pregnant women to with labour pain and have positive and effective childbirth experiences.

The midwives have a vital role in providing safe and effective nursing care to enhance reduction of labour pain perception during first stage of labour. This can be done by motivating the nurse midwives to:-



- (a) Have an in-depth knowledge on physiological changes during first stage of labour,
- (b) Understand the importance of reduction of pain perception during first stage of labour,
- (c) Develop skill in providing efficient nursing care for effective pain management during first stage of labour,
- (d) Develop knowledge and attitude towards non-pharmacological pain management method used during first stage of labour.

For these reason the researcher is interested in finding the effect of self instructional module for staff nurses on non-pharmacological pain management techniques during first stage of labour in term of knowledge and attitude. It is believed that finding of this study could be used as a guideline in improving quality of knowledge and attitude of staff nurses towards care of women in first stage of labour.

STATEMENT OF THE PROBLEM

A Pre-experimental study to assess the effectiveness of self instructional module on knowledge and attitude regarding non-pharmacological pain management techniques during first stage of labour among staff nurses working in selected hospital at Gorakhpur, U.P, 2011.

Objectives of research

1. To assess the knowledge and attitude on non-pharmacological pain management techniques during first stage of labour among staff nurses working in selected hospital at Gorakhpur.
2. To evaluate the effectiveness of self-instructional module regarding non-pharmacological pain management techniques during first stage of labour among staff nurses working in selected hospital at Gorakhpur.
3. To find the association between the posttest knowledge score among staff nurses with selected demographic variables.
4. To find the association between the posttest attitudes score on among staff nurses with selected demographic variables.

Operational Definition

1. **Self-Instructional module** –Refers to teaching self by means of a information booklet.
2. **Effectiveness** – refers to the effect of planned teaching program on non-pharmacological pain management techniques during first stage of labour as evidenced by gain in the post test score
3. **Knowledge** – knowledge means the information and understanding of staff nurses about meaning and utilization of non-pharmacological pain management techniques during first stage of labour.



4. **Attitude** – the attitude in this study means that how the staff nurse's (subject) thinking and feeling towards non-pharmacological pain management techniques during first stage of labour.
5. **Non-pharmacological pain management techniques** – the non-pharmacological pain management techniques which are provided during first stage of labour for the laboring women which are selected for the study are massage therapy, relaxation therapy, breathing techniques and positions to help lessen the labour pain.
6. **First stage of labour** – the first stage of labour is when the pregnant woman experiencing the pain which is having a effect on cervix to dilate and gradually this pain becoming more intense and strong and cervix effaced and dilate fully.
7. **Staff Nurses** – the professional who are trend personal in nursing to give professional nursing care to patient who are admitted in maternity hospital who are working in selected hospital at Gorakhpur.

Assumption

1. The staff nurses will have some knowledge regarding non-pharmacological pain management techniques during first stage of labour.
2. The staff nurses will have positive attitude toward the use of non-pharmacological pain management techniques during first stage of labour.
3. This SIM will have influence on knowledge and attitude among staff nurses and promote good practice regarding non-pharmacological pain management techniques during first stage of labour.

Research Hypothesis

1. There will be significant difference between pre and posttest knowledge and attitude score on non-pharmacological pain management techniques during first stage of labour among staff nurses.
2. There will be significant association between the post test scores and selected Demographic variables.
3. There will be significant association between attitude scores and selected Demographic variables

LITERATURE REVIEW

The present study is pre-experimental research which investigated the effects of a self-instructional module of non-pharmacological pain management techniques during first stage of labour on knowledge and attitude among staff nurses.

Studies related to knowledge and attitude toward labour and childbirth



- Studies related to practices of non-pharmacological pain management techniques during first stage of labour
 - Massage therapy
 - Relaxation and breathing techniques
 - Effleurage therapy
 - Position during labour
- Studies related to effectiveness of self-instructional module.

Lesotho midwives' utilization of non-pharmacological pain management methods during the first of stage labour, 2009. The purpose of this study was to determine the use of non-pharmacologic methods of pain management used by midwives in Lesotho. The research design was non-experimental and of a descriptive nature. All data was analysed on a nominal descriptive level. According to the results, the midwives indicated that they were taught non-pharmacologic methods of pain management, however they expressed that they inadequately use these methods during the first stage of labour due to shortage of staff, lack of privacy and space, a high midwife-mother ratio, culture and hospital policies. In the light of these findings, recommendations were made of maximizing the use of non-pharmacologic methods during the first stage of labour.

Kang JM. (2002) conducted a study to determine the effectiveness of using a self-learning module (SLM) to teach nurses about caring for the hospitalized children with tracheotomies'. Data analysis using an independent sample 't' test showed that statistically learning occurred after completion of the SIM ($p = 0.014$, $n = 85$). These findings can influence the way staff education is provided, giving the nurse educator an alternative, cost-effective, and time saving method of presenting information.

RESEARCH METHODOLOGY

Research Approach

The present study adopted the evaluative approach for the research study. Evaluative approach helps to explain the effects of independent variables on the dependent variables. This approach is considered most suitable for the study.

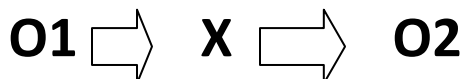
Research Design

The present study aimed at assessing the effectiveness of the SIM on the knowledge of staff nurse's regarding non-pharmacological pain management techniques during first stage of labour. The research design used for this study is pre-experimental study i.e one group pre and post-test. There is no control group in this



study. The pretest carried to assess the knowledge and attitude regarding non-pharmacological pain management techniques during first stage of labour among staff nurses and administration of self-instructional module and then a posttest to be conducted.

Subjects	Pre- test	treatment	Post test
Staff nurse's working at	O1	X	O2



This approach would help the investigator to evaluate the effectiveness of the intervention that is “self-instructional module” on the variables that is “knowledge and attitude” of the staff nurse’s regarding self-instructional module.

O_1 = Pre test knowledge and attitude score on non-pharmacological pain management techniques during first stage of labour

O_2 = post test knowledge and attitude score on non-pharmacological pain management techniques during first stage of labour

X = treatment, self-instructional Module on non-pharmacological pain management techniques during first stage of labour

VARIABLES

Variables are characteristic that vary among the subjects being studied. It is the focus of the study and reflects the empirical aspect of the concepts being studied, the investigator measures the variables.

The independent variable

In this study, the independent variable is the self-instructional module on “non-pharmacological pain management techniques during first stage of labour”

The dependent variable

The dependent variable in this study is the knowledge and attitude of staff nurse’s regarding non-pharmacological pain management techniques during first stage of labour

The extraneous variable



The study also consist of extraneous variable such as the age, educational status both general and professional, interest in OBG, professional experience, exposure to the means. In this study the extraneous variable are treated as the independent variable.

SETTING OF THE STUDY

The setting refers to the physical location and condition where data collection takes place. In this study, the research was conducted in “Dufferin Hospital, and L.N.M, N.E.R Railway Hospital District Gorakhpur, which was a 250 and 250 bedded hospital. The maternity area included antenatal ward, gynae ward, postnatal ward, post operative ward, labour room. The staffs working in these wards were taken as samples. According to the duty rosters of routine posting in the various ward the samples were selected, who were fulfilling the inclusion criteria.

POPULATION

The population of the present study consisted of staff nurse who are working in the district hospital at Gorakhpur.

Target Population: The target population of the study was staff nurses.

Accessible population: The accessible population in this study was the entire registered staff nurses who were working in the Dufferin Hospital and railways Hospital in the maternity area mainly in the antenatal ward, postnatal ward, post-operative ward, labour room. Altogether there was $90 + 65 = 155$ working in all areas of these two hospitals out of only 75 were found to fulfilling the inclusive criteria who are working in the maternity areas.

SAMPLE AND SAMPLING TECHNIQUE

Non probability convenient sampling techniques employed was used for selection of samples. The samples who were available at the time of data collection and also who fulfill the inclusion criteria were selected.

SAMPLING CRITERIA

The criteria for sample selection are mainly depicted under two heading, which includes the **inclusive criteria** and the **exclusive criteria**.

The inclusion criteria are as follows:

1. Nurses holding a diploma GNM or B.Sc. degree in nursing only.
2. Staff nurses who are exposed to the obstetrics and gynecology ward for more than 2 years.
3. Staff nurses who are able to communicate in Hindi and English.
4. Staff nurses who are available at the time of data collection.
5. Staff nurses who are wanted to participate in the study.



The exclusive criteria are as follows:

1. Staff nurses who are working in the night duties, operation therapies.
2. Staff nurses who are not willing to participate in the study.
3. Practical nurses or aids and nursing students who are getting training in the hospital.

DEVELOPMENT AND DESCRIPTION OF THE TOOL

The tool was prepared after extensive review of literature search, consultation with experts and based on the past clinical experience of the investigator.

Description of the tool:

The tool was prepared under three sections covering following area.

Section –A

PART -I

This part consists of 6 items seeking information about the demographic data of staff nurses such as age, basic educational status, professional education, clinical experience in the maternity, clinical status and any educational programme on pain management in labour attended.

PART – II

The part consists of structured knowledge questionnaire on 36 items. Each items was multiple choice in nature with 4 or 5 response in each question. There was one correct response that carries one marks and the wrong response carries zero mark. The total score was 36 for 36 items.

Structured Questionnaire based on content of self instructional module	Number of Items
Labour and labour pain	14
Labour Pain controls methods	4
Relaxation and breathing therapy	3
Massage therapy	5
Effleurage therapy	3
Position during labour	7
Total	36

The structured knowledge questionnaire consists of 4 sub area depicting the distribution of items according to the content areas based on the three domains namely knowledge comprehension and application. Knowledge



domain consists of 14 items, comprehension 12 and application consists of 10 respectively, items covering the following aspects.

PART – III

The part consists of attitude of structured attitude questionnaire on 24 items. Each items was likert scale of agree and disagree choice carrying 2 mark for agree and 1 marks for disagree choice correct response. The total highest score was 48 and lowest 24 for 24 likert scale items.

Section – B

Development of self-instructional module (SIM)

Self-instructional module was developed based on review of literature and the objectives stated for knowledge and attitude test. The title of the booklet was

“Self instructional Module On Non-pharmacological pain management techniques during first stage of labour”

The researcher prepared the self-instructional module on non-pharmacological pain management techniques during first stage of labour based on the 6 objectives in the form of booklet.

Self-Instructional Module consists of the following part:

- I. Labour and different stage and duration of labour, labour pain physiology, the first stage labour pain, pain controls techniques
- II. Non-pharmacologic way to practice to manage pain during the first stage of labour by relaxation and Breathing techniques.
- III. Non-pharmacologic way to practice to manage pain during the first stage of labour by Massage techniques for childbirth.
- IV. Non-pharmacologic way to practice to manage pain during the first stage of labour by Effleurage therapy
- V. Non-pharmacologic way to practice to manage pain during the first stage of labour by different position used during first stage of labour.

Scoring Key:

The knowledge and attitude on Non-pharmacologic pain management techniques during the first stage of labour was measures in terms of knowledge and attitude score. For section – B, part –I each correct answer was given a score of one and zero for wrong answer, the total score were 36. The attitude likert scale of 24 items, the highest score was 48 and lowest score was 24. To interpret the level of knowledge the score were distributed as follows:

Level of knowledge	Range
Adequate Knowledge	25 – 36
Moderately Adequate knowledge	13 – 24
Inadequate Knowledge	0 – 12



An answer key was prepared for scoring answer to self-administered questionnaire guide.

To interpret the level of Attitude the score were distributed as follows:

Level of Attitude	Range
Positive	40 – 48
Neutral	32 – 39
Negative	24 – 31

CONTENT VALIDITY

Content validity has a special relevance to individuals designing a test to measure knowledge in specific content area. The entire section of the tool was validated by 5 nursing experts and 2 medical persons.

RELIABILITY

Reliability was established by split half method for structured knowledge and attitude questionnaire. 6 samples were used to check the reliability through split half method. This was done by splitting the items in to odd and even items.

ETHICAL CONSIDERATION

No ethical issues were raised by conducting this study.

PROCEDURE FOR DATA COLLECTION

The investigator collected data in two selected hospitals of Gorakhpur, Dufferin, district hospital and L.N.M, N.E.R Railway Hospital, during specified period of 3 weeks. It was from 1-04-11 to 23-04-11. Prior permission from the Medical Director of Railway Hospital, Gorakhpur and Chief Medical Officer of Dufferin Hospital, Gorakhpur, was obtained for conducting the main study. The method of data collection adopted for the study was structured self-administered knowledge and attitude questionnaire.

Phase – I: with the prior informed consent, pre-test was conducted through structure knowledge and attitude questionnaire for the treatment group.

Phase – II: investigator issued the self-instructional module in the form of booklet.

Phase – III: After 7 days, post-test was conducted to the same (sample) treatment group.

All the subjects were very co-operative and investigator expressed her gratitude for their cooperation.

As first part of the study, pre-test was conducted by distributing the questionnaire and instructions were given on answering the questions and doubts were clarified. Each nurse took 30 – 45 minutes to answer the questionnaire. After the pre-test, self-instructional module on non-pharmacological pain management techniques during first stage of labour was distributed to all and explained to the subjects reinforcing them to



read the booklet. On the seventh day the post-test was conducted by the giving the same structured knowledge and attitude self administered questionnaire.

PLAN FOR DATA ANALYSIS

Data analysis is the systematic organization and synthesis of research data and testing of research by using those data. The plan for data analysis includes descriptive statistics i.e, frequency, percentage, mean and standard deviation whereas for inferential statistics it includes the Z test and chi-square test.

Descriptive Statistics

1. Frequency and percentage distribution of demographic variables.
2. Mean and standard deviation to assess the knowledge and attitude in both pre and posttest.
3. Distribution of scores on the knowledge and attitude of staff nurses to be interpreted by summarizing in to these categories such as inadequate, moderate and adequate.

Inferential Statistics

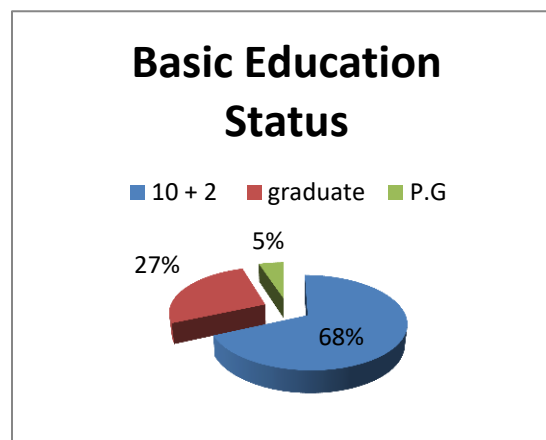
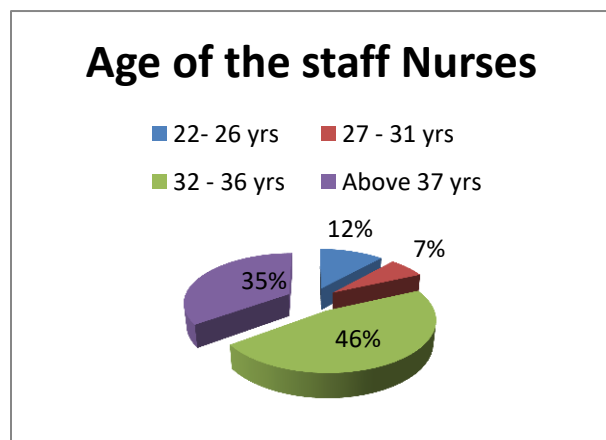
1. Z test to find out the difference between the pre-test and post-test level of knowledge and attitude among staff nurses regarding non-pharmacological pain management techniques during first stage of labour.

Chi-square test to associate the posttest level of knowledge and attitude among staff nurses with selected demographic variables

DATA ANALYSIS AND INTERPRETATION

The analysis and interpretation was based on the data collected through self-administered questionnaire. The data's were collected from 60 staff nurses before and after administration of self-instructional module and was organized, tabulated, analyzed and interpreted by using descriptive and inferential statistics.

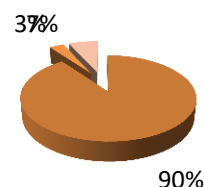
Section - A:- Demographic Variables of Staff Nurses





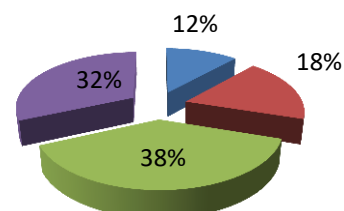
Professional Educational Status

■ GNM ■ B.Sc N ■ P. B.Sc N



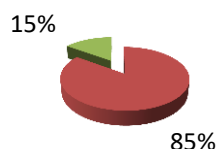
Clinical Experience

■ 1 - 5 yrs ■ 6 - 10 yrs ■ 11 - 15 yrs ■ Above



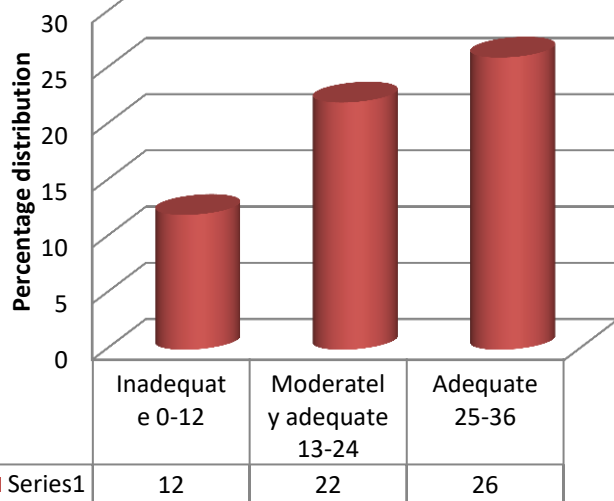
Marital Status

■ married ■ unmarried



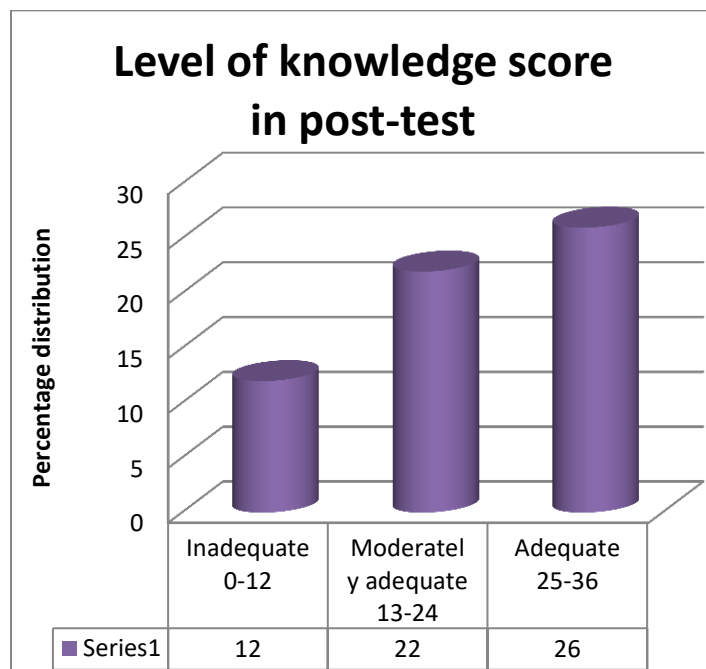
Section - B: - Assessment of pre and post test of knowledge among staff nurses on non – pharmacological pain management techniques during first stage of labour.

Level of Knowledge score in pre-test



N = 60

Graph 7: Percentage distribution of staff nurses on pre-test level of knowledge score



Graph 8: Percentage distribution of staff nurses on post-test level of knowledge score.

Section - C: - Assessment of pre and post test of Attitude among staff nurses on non – pharmacological pain management techniques during first stage of labour.

PART- II TESTING HYPOTHESIS

Section-D effectiveness of self-instructional module on knowledge and attitude regarding non-pharmacological pain management techniques during first stage of labour among staff nurses.

In the study, table 6 depicts the mean, SD and the mean difference for the knowledge variables among staff nurses in the pre-test and post-test. The present study reveals that the pre-test mean was 13.53 with SD 4.073 and post-test mean was 23.80 with SD 4.39 and the overall mean difference obtained between pre-test and post-test was 10.27.

In the study, table -8 reveals the range, mean, standard deviation, mean difference and Z- Test value.

It was inferred that, there was significant increase in knowledge levels among staff nurses non – pharmacological pain management techniques during first stage of labour.

It was inferred that, there was significant increase in attitude levels among staff nurses non –pharmacological pain management techniques during first stage of labour.



DISCUSSION

OBJECTIVES OF THE STUDY

1. To assess the pre-test level knowledge and attitude on non-pharmacological pain management techniques during first stage of labour among staff nurses working in selected hospital at Gorakhpur.

In the study it was observed that in the pre-test, out of 60 subjects that majority 36 (60%) of the have inadequate level of knowledge on non-pharmacological pain management techniques during first stage of labour whereas 24 (40%) of subjects were having moderate level of knowledge for the same. There was no subject with the adequate level of knowledge.

The mean score for overall level of knowledge among staff nurses in the pre-test was 13.53 with the standard deviation of about 4.073.

The mean score for overall level of attitude among staff nurses in the pre-test was 40.37 with the standard deviation of about 4.11.

2. To evaluate the effectiveness of self-instructional module regarding non-pharmacological pain management techniques during first stage of labour on knowledge and attitude among staff nurses working in selected hospital at Gorakhpur.

In the study, it was observed that in the post test, out of 60 subjects, majority 26 (43.33%) of them have adequate knowledge, and 22 (37.67%) of them were moderately adequate knowledge and there were 12 (20%) of them subjects with inadequate knowledge.

The overall mean score for level of knowledge and attitude among staff nurses in the post test was 23.80 and 45.37.

The comparison of mean, standard deviation and mean difference of knowledge score between pre-test and post-test revealed that, obtained post mean value 23.80 was higher than the pre-test mean value 13.53. The mean difference between pre-test and post-test was 10.27 and the obtained Z-test value was 13.84 which was highly significance at ($p < 0.001$).

The overall mean score for level of attitude among staff nurses in the post test was 45.37. This indicates that the self instructional module which was administered by the investigator to the subjects was effective, since subjects had significant improvement in knowledge scores score and attitude on non-pharmacological pain management techniques during first stage of labour.



3. To find the association between the post test knowledge score among staff nurses with selected demographic variables.

Association was done between post-test level of knowledge and demographic variables among staff nurses using chi-square test. All the demographic variables such as age, basic educational status, professional status, clinical experience, marital status, and any programme attended on pain management during labour showed no significance with the post-test level of knowledge of staff nurses.

4. To find the association between the posttest attitudes score on among staff nurses with selected demographic variables.

Association was done between post-test level of attitude and demographic variables among staff nurses using chi-square test. All the demographic variables such as age, basic educational status, professional status, clinical experience, marital status, and any programme attended on pain management during labour showed no significance with the post-test level of attitude of staff nurses.

SUMMARY, CONCLUSION, IMPLICATION, RECOMMENDATIONS AND LIMITATION

The women are lacking the knowledge about the non-pharmacological pain management techniques during first stage of labour; it is the responsibility of the nurses or midwives to impart the knowledge to women. Nurses have all the potentials such as compassion, care and should have positive attitude that can contribute significantly in non-pharmacological pain management intervention

Major findings of the study revealed that

Findings related to demographic variables

- The maximum numbers of the staff nurses 46.67 % were between the age group of 32-36 yrs.
- The maximum numbers of staff nurses 68% having basic educational status 10+2.
- The maximum numbers of staff nurses 90% having GNM as professional qualification.
- The maximum numbers of staff nurses 38 % having 11 – 15 years of clinical experience.
- The maximum numbers of staff nurse 85% were married.

Finding related to self-instructional module

- ✚ Assessment of overall level of knowledge among staff nurses in the pre-test reveals that out of 60 subjects, majority 36 (60%) of them have inadequate knowledge and 24 (40%) of them had moderately adequate knowledge and there were no subjects with adequate knowledge.
- ✚ The mean score for overall level of knowledge among staff nurses in the pre-test was 13.53 with standard deviation 4.073. These decreases in the total knowledge score indicates that the staff nurses



need more information on non-pharmacological pain management techniques during first stage of labour.

- + Assessment of overall level of attitude among staff nurses in the pre-test reveals that out of 60 subjects, majority 38 (63.33%) of them have positive attitude and 15 (25%) of them had neutral attitude and there were only 7 (11.67%) subjects have negative attitude towards use of non-pharmacological pain management techniques during first stage of labour.
- + The mean score for overall level of attitude among staff nurses in the pre-test was 40.37 with standard deviation 4.11.
- + Assessment of overall level of knowledge among staff nurses in the post-test reveals that out of 60 subjects, majority 26 (43.33%) of them have adequate knowledge and 22 (36.67%) of them had moderately adequate knowledge and there were only 12 (20%) subjects with inadequate knowledge.
- + The mean score for overall level of knowledge among staff nurses in the post-test was 23.08 with standard deviation 4.39. This depicts that after reading the self-instructional module, subjects had improved their knowledge on the various aspects such as labour and labour pain, labour pain control methods.
- + Comparison of mean, standard deviation and mean difference of knowledge score between pre-test and post-test revealed that obtained post-test mean value 23.80 was higher than the pre-test value 13.53. The mean difference between pre-test and post-test was 10.27 and obtained Z-test value was 13.84 at $p < 0.001$.
- + Comparison of mean, standard deviation and mean difference of attitude score between pre-test and post-test revealed that obtained post-test mean value 45.37 was higher than the pre-test value 40.37. The mean difference between pre-test and post-test was 5.11 and obtained Z-test value was 7.81 at $p < 0.001$.
- + The above findings states that the null hypothesis " H_{01} – There will be no significant relationship states in the knowledge level of the staff nurses before and after the administration of self instructional module" was rejected. This indicates that the self instructional module which was administered to the subjects was effective
- + There was no statistically significant association between post-test level of knowledge and demographic variables among staff nurses.
- + There was no statistically significant association between post-test level of attitude and demographic variables among staff nurses.

CONCLUSION

The study was conducted at "Dufferin Hospital & Railway Hospital, Gorakhpur, U.P. Non-probability convenient sampling technique was used to select the samples. The data were collected from 60 respondents who were staff nurses by structured self-administered questionnaire before and after the administered of self-instructional module.

On the basis of the findings the following conclusions were made

- ❖ The findings of the study revealed that there was a marked increases in overall knowledge level scores 23.80 of post-test than the pre-test score 13.53 and the obtained Z-test value was 13.84 which was



highly significant at $p < 0.001$ which represent the effectiveness of self-instructional module on non-pharmacological pain management techniques during first stage of labour.

- ❖ Self-instructional module which was prepared was very effective and this will help the nurses to carry the booklet to any place, it will be convenient for the nurse to refer then and there, helps the nurses to teach the student nurses in the wards, labour room, to upgrade their knowledge, inexpensive and readily available and can be tried in any settings of clinical practice.

NURSING IMPLICATIONS

The investigator has drawn the following implication in the field of nursing practice, nursing education, nursing administration and nursing research.

1. Nursing practice

Nurses are key personnel of the health team, who play a major role in the promotion and maintenance; nursing is a practicing profession, so the investigator, general integrates findings into practice.

- Nurses can conduct teaching session for women during their perinatal clinic visits to the hospital will help in improving the knowledge of women in their labour pain control.
- Any form of education will enhance like continuing education, learning materials such as self-instructional module will enhance quick reference and knowledge in practice.
- Nurses being the key members of the health team have vital role to play in handling the situation with the competencies at site of caring and managing the labouring women during first stage of labour in the labour room.
- Seminars, symposiums, workshop etc., can be conducted for the nurses by the nursing personnel and obstetrician for updating their knowledge on non-pharmacological pain management techniques during first stage of labour and they in turn can teach this to the public for creating awareness.

2. Nursing Education

- This study emphasis on the enhancement of knowledge regarding non-pharmacological pain management techniques during first stage of labour in order to provide best possible care to labouring women.
- As change begins with education, INC and Universities should include non-pharmacological pain management techniques in labour process.
- The student nurses from school or college of nursing should encouraged to attend specialized courses and seminars regarding non-pharmacological pain management techniques during first stage of labour and encourage them for its practice in clinical under supervision.
- Nursing school, colleges and teachers should come forward and encourage the students to gain knowledge with positive attitude on non-pharmacological pain management techniques during first stage of labour with the help of audio visual aids.
- In community areas(urban especially), student nurses can periodically conduct mass education programme on non-pharmacological pain management techniques during first stage of labour which will in turn bring awareness to the women about it and help them to understand their labour pain



physiology and how to control pain and to reduce more operative obstetrical intervention during labour.

3. Nursing Administration

Staff development program in any organization is the prime responsibility of the nurse administration. In the era of development of advanced technology, demand for quality and competent care, improved awareness on dignity of life, all poses a challenge to nurse administrator to demonstrate their efficacy in providing care to the women during labour pain

- Nurse administrator should take responsibility in equipping their hospital to meet the needs of women during the labour pain.
- Policies related to hospital safety in case of labour pain in intranatal period of pregnant women should include in every organizational plan.
- Nurse administrator must utilize available resources which are technological sound in teaching the pregnant women through mass education programme in the community setup.
- Specialized teaching package on non-pharmacological pain management techniques during first stage of labour create interest among pregnant women and serve as reference materials.
- Professional interaction between the nurses and the ladies will help to improve professional standards and create better images in the community about its practice and utilization.

4. Nursing research

- There is a need for extensive research in this area so that strategies for educating the nurses and the public on non-pharmacological pain management techniques during first stage of labour can be developed and reduces the operative obstetrical interventions in the future with awareness.
- This study will serve as valuable reference material for the future investigators.
- The nurse researcher can conduct research on the various aspects of labour pain management on the direct labouring women with experimental approach in specific therapy which provide more scientific data and add on to the body of knowledge in nursing
- This will be help nurses to deal efficiently and effectively thus reducing the morbidity and mortality rates due to the operative obstetrical intervention during the delivery or childbirth.

RECOMMENDATION

Replication of this study can be done with the large samples in different setting to validate and generalize the findings.

1. Similar studies can be conducted on practice of the staff on non-pharmacological pain management techniques during first stage of labour in labour room.
2. The same study can be conducted with an experimental research approach having a control group among intranatal women.
3. Alternative teaching strategies like interactive learning sessions, structured teaching programme, etc can be conducted and evaluated.

LIMITATION



1. There was no control group.
2. The study was limited to two hospitals as the sample sizes were limited to 60. Hence possibility for wider generalization is limited.

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