EFFECTIVENESS OF AUDIO ANALGESIA UPON LABOUR PAIN AND COPING IN PRIMIPARTURIENT WOMEN

BY

SATHYA.R

A DISSERTATION SUBMITTED TO THE TAMILNADU DR.M.G.R.MEDICAL UNIVERSITY, CHENNAI, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING

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DECLARATION

I hereby declare that the present dissertation entitled **"Effectiveness of Audio Analgesia upon labor pain and Coping among Primi parturient Women"** is the outcome of the original research work undertaken and carried out by me under the guidance of **Dr. LathaVenkatesan,** M.Sc (N)., M. Phil (N)., Ph.D (N)., Principal, Apollo College of Nursing and **Prof.Lizy Sonia. A**, M.Sc (N), Ph.D (N), Vice Principal, Apollo College of Nursing, Chennai. I also declare that the material on this has not found in any way, the basis for the award of any degree or diploma in this university or any other universities.

M.Sc., (N) II Year

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SYNOPSIS

An Experimental Study was conducted to Assess the Effectiveness of Audio Analgesia upon Labour Pain and Coping among Primiparturient Women in the First Stage of Labour at Devarajmanikchand Maternity Hospital, Chennai.

The objectives of the study

1. To assess the level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
2. To compare the level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
3. To determine the level of satisfaction of primiparturient women after administration of Audio-Analgesia in the experimental group.
4. To find out the association between level of demographic variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
5. To find out the association between level of obstetrical variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

The concept was based on Widen Bach's helping the art of clinical nursing theory. The variables of the study were Audio Analgesia and labor pain. Null hypothesis were formulated. The level of significance selected was $p<0.05$.An extensive review of literature was made based on the opinions of the experts. An experimental study of pre-test and post-test design was used. The study included 60 Primiparturient women who

were selected by simple random sampling. The study was conducted in Devarajmanikchand maternity hospital Chennai.

Demographic variable proforma, Obstetric variable proforma, Modified pain intensity scale, Pain coping scale, Modified WHO Partograph and Rating scale on satisfaction of Audio Analgesia were the various tools used by the researcher. The validity was obtained from various experts and found to be highly reliable. The main study was conducted after the pilot study.

The level of labour pain, coping and feto-maternal parameters were assessed for the control and experimental group of Primiparturient women. The Audio Analgesia was provided for the duration of 15 to 20 minutes at interval of 1 to 2 hours for the experimental group. Then the level of labour pain, coping and feto-maternal parameters were assessed again in both the groups. The level of satisfaction of Audio Analgesia was assessed among the experimental group of Primiparturient Women. The data obtained were analyzed using Descriptive and inferential statistics.

Major findings of the Study

- Majority of the women were between the age group of 21 – 25 years (76.7%, 76.7%), were Hindu (80%, 70%), with secondary education (80%, 70%) were homemakers (86.7%, 76.7%), resided in urban areas (96.7%, 83.3%), moderate workers (86.7%, 90%), and most of them belonged to nuclear family (43.3%, 66.7%) and had previous information about Audio Analgesia (60%, 66.6%) in control and experimental group respectively.

- All of them were primi gravida with no complications during the antenatal period, does not received any type of pain management during labour and there was no fetal complication during delivery. The majority of the women were between the gestational age of 37 – 39 weeks (83.3%, 66.7%), had more than five antenatal visits (76.7%, 83.3%) and underwent normal vaginal delivery (66.7%, 80%) and most of the women had a duration of first stage of labor between 10 – 12 hours (60%, 70%) in control and experimental group respectively.
- The mean pain level in the control group was high after therapy (M=5. 5, SD=0. 77) compared to before therapy (M=5. 4, S. D=0. 37) whereas the mean value of pain was low (M=3. 4, SD=0. 34) after therapy in the experimental group when compared with before therapy (M=4. 74, SD=0. 44). The level of confidence was 99.9% and it shows the effectiveness of Audio analgesia upon labor pain. Hence the null hypothesis H_{01} was rejected.
- The mean coping level was low after therapy (M=3. 8, SD=0. 44) in comparison to before therapy (M=4. 6, SD=1. 29) in the control group whereas the mean coping level was found to be high after therapy (M=5. 2, SD=0. 38) in comparison with before therapy (M=4. 3, SD=0. 94) of the experimental group. Thus the effectiveness of Audio analgesia was statistically proved at the 99.9% level of confidence. Hence the null hypothesis H_{01} was rejected.
- The mean and standard deviation of the frequency of uterine contraction in the experimental group was lower after therapy (M=3. 2, SD=0. 14) when compared to before therapy (M=4. 14, SD=0. 22) and uterine contraction duration was higher after therapy (M=49. 5, SD=3. 51) compared to before therapy (M=41. 4,

SD=3. 21) at $p<0.05$ and $p<0.001$ level of significance of the control and experimental group respectively. The mean cervical dilatation in the control group (M=6. 49, SD=0. 44) was lesser than the experimental group (M=7. 44, SD=0. 26). Hence the null hypothesis H_{01} was rejected.

- The majority of the women were highly satisfied (60%) and moderately satisfied (37%) with the Audio Analgesia during the first stage of labour and none of them reported dissatisfaction towards the intervention.
- There was a significant association between type of work in experimental group of demographic variables at ($\chi 2 = 5$, df =1) $p< 0.05$ level. The null hypothesis H_{02} was rejected with regard to experimental group alone.
- No significant association was found between selected obstetric variables with the level of labour pain, coping and feto- maternal parameters before and after the Audio Analgesia in the control and experimental group of primi parturient women. Thus the null hypothesis H_{03} was accepted.

The above finding reveals that Audio Analgesia used by the researcher during the labour among primiparturient women was effective in reducing the perception of labour pain and increasing the coping level during the labour without affecting the feto-maternal parameters.

Recommendations

- A comparison can be made between primi and multi Gravida.
- A comparison can be made with different stages of labor.
- Can be conducted at different setting and conducted with larger number of samples
- A comparison can be made between different types of alternative and complementary therpies .

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CHAPTER I

INTRODUCTION

Background of the Study

"Feeling fats last nine months but the joy of becoming a mom lasts forever"

- Nikki Dalton

The role of motherhood plays in the development of a child cannot be under estimated. The bond between a mom and her son or daughter may be tested not broken.

Childbirth is one of the most marvellous and memorable segment in a woman's life. It does not really matter if the child is the first, second or the third one. Each experience is unique and calls for a celebration. The fear and anxiety about childbirth often prevent most women from enjoying this experience. However, an adequate knowledge about the signs of labour and delivery in general can impart a feeling of confidence and a sense of emotional well-being, very crucial in ensuring a successful labour. It is very important to communicate hopes or fears about labour and delivery with your doctor, based on which critical decisions can be made in the best interest of the women and child.

Labour is defined as the series of events that take place in the genital organs in an effort to expel the viable products of conception out of the womb through the vagina into the outer world.

During labour, the woman experiences some degree of stress, as her system responds to the physical changes that prepare her to give birth. Nearly every woman in labour, experiences some degree of discomfort. Perception of pain is highly unique and

differs from one individual to another, though the intensity of pain stimuli is same. An appreciation of each woman's unique experience of pain is possible when perinatal nurses understand the physiological basis of pain and psychosocial factors influencing pain perception.

As expectant women approaching her due date, the woman will be concerned about the pain she will experience during labour. There are a great many choices for pain relief, both pharmacological and non-pharmacological measures.

An average birth rate for the whole world in the year 2008 was 19.5 per year 1000 births. There are approximately 6 million pregnancies and 4 million births in the United States every year. In India, 128.9 million births occur per year. The birth rate in Tamil Nadu and Chennai in the year of 2009 was 16.3 per 1000 births and 15.3 per 1000 births respectively. (Department of health and family welfare, 2009)

In global level Geneva New York the number of women dying due to complications during childbirth has decreased by 34% from as estimated 546,000 in 1990 to 358,000 in 2008 according to the new report. In 2004-2006 the total maternal mortality rate in India was 254 per 1, 00,000. In 2007-2009 maternal mortality rate was 212. The maternal mortality rate is measured number of women aged 15-49 years dying due to maternal causes per 1,00,000 live birth. In 2004 - 2006 Tamil Nadu maternal mortality rate was 111. In 2007-09 maternal mortality rate was 97. The maternal mortality rate is measured number of women aged 15-49 years dying due to maternal causes per 1,00,000 live birth. (censusindia.gov.in)

During Labour women experience some degree of stress as her system responds to the physical changes that prepare to give birth. Nearly every woman in labour experiences some degree of discomfort. Perception of pain in highly unique and differs from one individual to another individual though the intensity of pain stimuli is same. 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 feeling of control.

Pharmacological methods of pain management include epidural or spinal medications, narcotic analgesics also reduces a labour pain quickly but it produces a side effect to both mother and baby.

Non-pharmacological measures include continuous labour support, hydrotherapy, ambulation and position changes, acupuncture and acupressure, music and Audio Analgesia, attention focusing imagery, therapeutic touch and imagery, breathing technique and effleurage. Non - pharmacological measures usually simple, safe and inexpensive to use. Among the non - pharmacological method of pain relief in a hospital, Music therapy for pain relief has been shown increasing release of endorphins which are extremely effective natural pain killers that also improve the body's performance and promote positive feelings and also it will not produce there is no side effects.

Anderson & Johnson (2005) conducted randomized controlled studies to identify the use of complementary and alternative therapies for obstetric treatment and health promotion. Fifty four articles assessing a variety of health modalities meeting the

criteria were included. The study concluded that complementary and alternative medicine interventions have evidence of effectiveness of use in obstetrics.

Phumdoung (2007) conducted a Randomized control study to examine the effects of Audio Analgesia for pain management of labour on maternal morbidity. They assigned a woman in the control group was 55 and an experimental group was 55 without a lyric in Audio Analgesia. The findings concluded that Audio Analgesia and music were beneficial for the management for pain during labour and women receiving music reported less pain compared with women in the control group.

Need for the Study

Pregnancy is one of the important events in her life. It is so amazing how a creature emerges from another creature, quite similar in genetic makeup but a totally different individual with unique personality and distinct characteristics. Childbearing is one of the complex processes that all women who want to have a child should undergo and it encompasses a lot of problem and complications.

The current maternal mortality rate of India is 212 per one lakh live birth; whereas the country's millennium development goals in this respect are 109 per one lakh live births by 2015. Over the last three decades, women have been waiting longer to start having children. In 1970 the average reproductive age of women was about 21years. In 2008 the average reproductive age was 25 years. In 2009 the birth per 1000 women ages 15 to 44. This was a 3 per cent decline from 2008 and a reversal of the increases seen in 2006 to 2008. In 2010 the birth rate dropped another 3 % to 64.7 births per 1000 women ages 15 to 44. In Tamil Nadu maternal mortality rate is 2004-06 total

mortality rate was 111. In 2007-09 maternal mortality rate was 97. The maternal mortality rate is measured number of women aged 15-49 years dying due to maternal causes per 1,00,000 live birth. (Millennium development goal, 2012)

Pregnancy is a wonder full event that time she is having pain, fatigue, fear and negative moods. Every woman needs pain relief and reduction of pain should be as much as possible. The pain relief approach is the norm at the moment. Nowadays women prefer to opportunity for natural childbirth when the pain is relieved by any means. Many complementary non pharmacological measures which are safe and simple are hidden behind the screen making the labour process so strange and crucial.

There are several Non - pharmacological methods are implemented during natural childbirth to aid the women. Pain management techniques other than medication include hydrotherapy, massage, relaxation therapy, hypnosis, breathing exercise, vocalization and visualization, mind fullness and water birth. Audio Analgesia is the use of auditory stimulation, such as music, white noise, or environmental sounds to decrease pain perception. Its use is popular for the relief of pain during dental work, after surgery, and for other painful situations. It is also used during labour; to relieve the labour pain.

A wide variety of pain relief measures are available to women in labour. This retrospective, descriptive survey design study examined which non pharmacological pain-relief techniques labour women use most often and the effectiveness of the chosen techniques. Of the 10 non pharmacological strategies rated by the sample (N = 46), breathing techniques, relaxation, acupressure, and massage were found to be the most

effective. However, no specific technique or techniques were helpful to all participants. The results provide directions for childbirth educators in designing and implementing an effective childbirth education curriculum that assists women to have empowered birth experiences.

Witoon (2000) one trail of audio-analgesia was undertaken in England. Recruited 25 women, 24 women completed the trail. Women were randomized to receive Audio- Analgesia which consisted of 'sea noise′ white sound set at 120 decibels or to the control group who received sea noise at a maximum 90 decibels. The findings reported that Audio Analgesia seems to reduce pain during the first stage of labour in parturient women.

With the increased need for pain relief and decreased coping among the parturient mothers in the present world, it becomes the responsibility of the nurses to provide some type of pain relief measures. Though there are various types of pain relief measures, the method chosen should not affect the labour, condition of the mother and the baby and should decrease pain perception. Most studies of Audio- Analgesia during labour have reported that it can increase the pain tolerance, reinforce or elevate moods. Or cue the women to move or breathe rhythmically, especially if she is conditioned herself to do so before the onset of labour.

Statement of the Problem

An Experimental Study to Assess the Effectiveness of Audio-Analgesia upon Labour pain and Coping among Primiparturient women in the First Stage of Labour at Deva raj Manikchand Maternity Hospital, Chennai.

Objectives of the Study

1. To assess the level of labour pain, coping and feto-maternal parameters before and after administration of audio-analgesia in control and experimental group of primiparturient women.
2. To compare the level of labour pain, coping and feto-maternal parameters before and after administration of audio-analgesia in control and experimental group of primiparturient women.
3. To determine the level of satisfaction of primiparturient women after administration of audio-analgesia in experimental group.
4. To find out the association between level of demographic variables and labour pain and coping before and after administration of audio-analgesia in control and experimental group of primiparturient women.
5. To find out the association between level of obstetrical variables and labour pain and coping before and after administration of audio-analgesia in control and experimental group of primiparturient women.

Operational Definition

Effectiveness

In this study effectiveness refers to the outcome of the Audio Analgesia on the level of labour pain of primiparturient women before and after administration of Audio Analgesia in the first stage of labour with duration of 15 to 20 minutes and interval of 1 to 2 hours as measured by 0-10 numeric pain intensity scale.

Audio-Analgesia

In this study Audio Analgesia refers to the use of auditory stimulation such as recorded tape sea white noise in first stage of labour with duration of 15 to 20 minutes and interval of 1 to 2 hours using the head phone in experimental group.

Labour pain

In this study labour pain refers to back pain and discomfort associated with contractions of the uterus of parturient women as measured by 0-10 numeric pain intensity scale.

Foeto-maternal parameters

The parameters which are measured by the researcher through modified WHO Partograph namely foetal heart rate, maternal heart rate, maternal blood pressure, duration and frequency of uterine contraction and cervical dilatation.

Primiparturient women

The normal pregnant woman who is in labour for the first time.

Level of satisfaction

In this study level of satisfaction is a feeling of gratification attainment or achieved by Audio-Analgesia in primiparturient women as measured by rating scale prepared by the investigator.

Assumptions

The study assumes that

- Natural child birth aims to maximize the innate birth physiology and the labouring movement of healthy well-nourished women.
- The experience of labour pain varies markedly from women to women.
- Audio Analgesia appears to directly suppress the pain caused by labour pain.
- Audio Analgesia removing source of conditional anxiety
- Audio Analgesia the music and the noise with the sounds like a waterfall having a relaxing effect and distract attention away from the labour pain
- Audio Analgesia technique to produce a real clinical effect.

Null Hypotheses

Ho_1 There will be no significant association between level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of parturient women.

Ho_2 There will be no significant association between level of demographic variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of parturient women.

Ho_3 There will be no significant association between level of obstetrical variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of parturient women.

Delimitations

This study was limited to primiparturient women

- Who were admitted in labour Ward at Devaj manikchand maternity Hospital, Chennai.
- Who were willing to participate in the study.
- Women in first stage of labour and 37 to 42 weeks of gestation.
- Able to understood and speak either Tamil or English
- The study was limited to who were normal women at the time of data collection.

Conceptual Framework

The conceptual Framework deals with the interrelated concepts those are assessable together in some rational schemes by virtue of the relevance to a common theme, conceptual framework process of ideas, which are formed and utilized and for the development of a research design. It helps the researcher to know what data needs to be collected and gives direction to an entire research process.

The conceptual framework for the present study is the modified model of Wiedenbach′s helping art clinical nursing theory. Ernestine Wiedenbach proposed a prescriptive theory of nursing which is described as a conceiving a desired situation of the ways to attain it. Prescriptive theories direct action towards an explicit goal. It consists of 3 factors: central purpose, prescription and realization. A nurse develops a prescription based on a central purpose and implements it according to the realities of the situation.

The central purpose of the model refers to what a nurse wants to accomplish. It is the overall goal towards which a nurse strives; it transcends the immediate intent of the assignment or task by specifically directing activities towards a patient good. The central purpose of this study is to minimize the labour pain. The researcher plans the prescription that will full fill the central purpose by identifying the various means to achieve the goal. Thus the researcher selected the method, Audio Analgesia as it is effective and without any side effects.

Prescription refers to the plan of care of patients. It specifies the nature of the actions that will full fill the nurse's central purpose and acts as a rationale for the action.

Realities refer to the physical, physiological, emotional and spiritual factors that come into play in a situation involving nursing action. The five realities identified by Wiedenbach are an agent, recipient, goal, means and framework where the agents the practicing nurse; recipient is one who receives the nurse action, the goal is a nurse desired outcome; the means are the activities and devices used by the nurse to achieve the goal; the framework refers to the facilities in which nursing is practiced .

The realities identified studies are:

Agent - researcher

Recipient - primiparturient women in first stage of labour

Goal - to minimize the pain

Means - Audio Analgesia

Framework - delivery suite

Wiedenbach′s view nursing practice as an art based on goal directed care. Her vision of nursing practice closely parallels the assessment, implementation and evaluation steps of the nursing process. She identifies seven levels of (awareness, perception, assumption, realization, insight, design and decision) .

According to Wiedenbach nursing practice consists of identifying a patient's need for help and validating that the need for help was met. In this study, 30 women with the first stage of labour were to identify the intervention group (Audio Analgesia)**.** Assessment before treatment in the experimental group was done. Intervention was given for the experimental group. Post assessment was conducted. A positive outcome represents the relief of pain. A negative outcome represents no relief of pain.

The model adopted for this study is the modified form of Wiedenbach′s helping art of clinical nursing theory. Researcher adopted this model and perceived apt in enabling to assess the effectiveness of Audio Analgesia during the first stage of labour to minimize the pain.

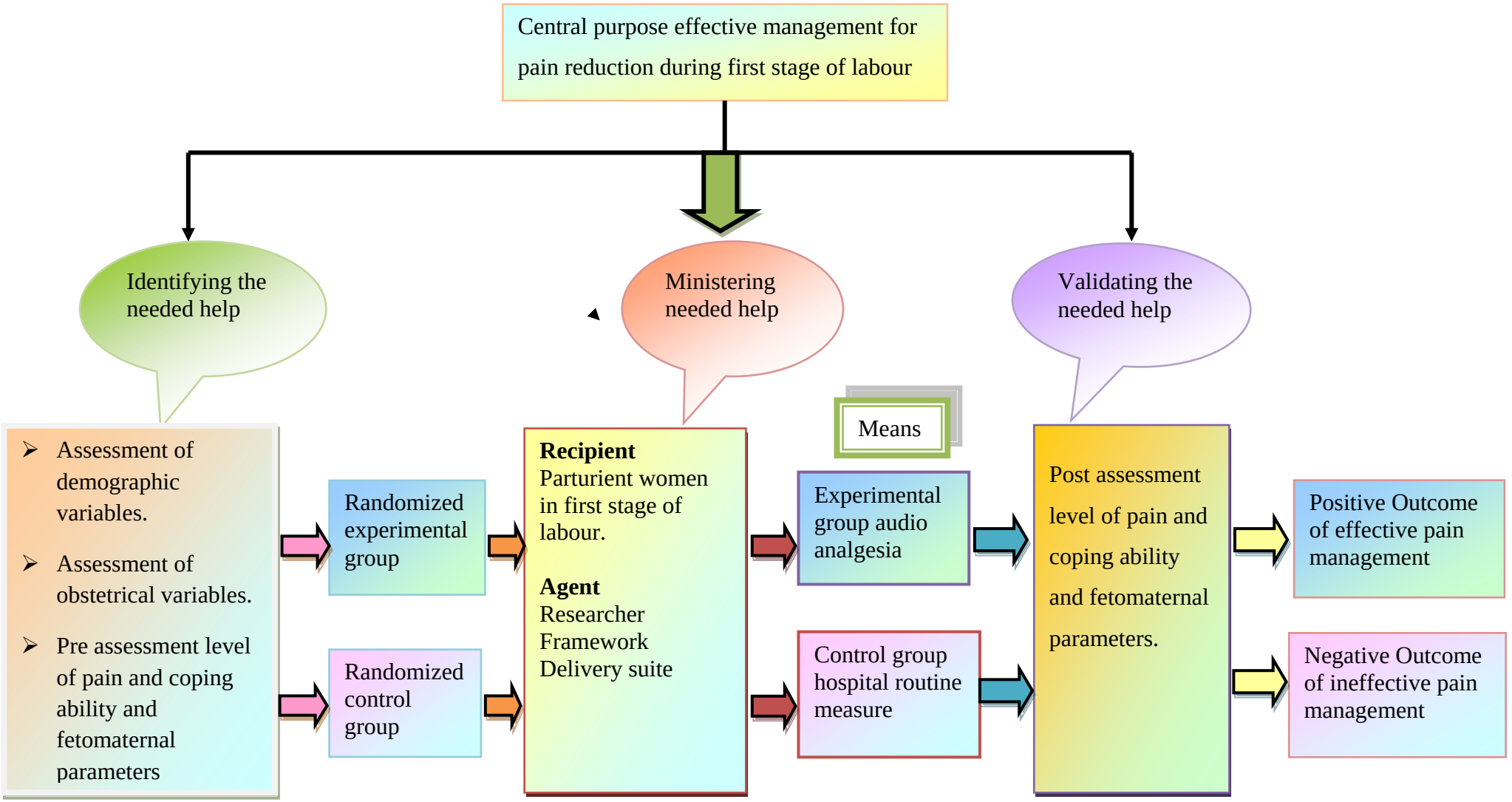

Fig.1 Conceptual Framework Based On Wieden Bach's Helping Art of Clinical Nursing Theory

Projected Outcome

The study projects that Audio analgesia will have a change in the level of labour pain and coping among the primiparturient women.

Summary

These chapters deal with the background of the study, need for the study, statement of the problem, objectives of the study, operational definitions, assumptions, null hypothesis, delimitations and conceptual framework.

Organization of the Report

Further aspects of the study are presented in the following five chapters.

CHAPTER – II : Review of literature

CHAPTER – III : Research methodology includes research approach, research design, setting, population, sample and sampling techniques, tool description, content validity and reliability of tools, pilot study, data collection procedure and plan for data analysis.

CHAPTER – IV : Analysis and interpretation of data

CHAPTER – V : Discussion

CHAPTER – VI : Summary, conclusion, implications, recommendations and Limitations.

CHAPTER II

REVIEW OF LITERATURE

A literature review is an organised written presentation of what has been published on a topic by scholars (burns &groove, 2004)

This chapter deals with a review of published and unpublished research studies and from related material for the present study. The reviews help the researcher to develop an insight into problem areas. These reviews help the researcher to develop an insight into the problem area. This will help the researcher in building the foundation of the study.

The review literature in this chapter has been presented under the following headings.

- Literature related to labour pain.
- Literature related to pain management in labour.
- Literature related to audio analgesia
- Literature related to audio analgesia upon labour pain.

Literature related to Labour pain

Searle (2010) conducted a randomized clinical trial to assess the factors influencing maternal position during labour. Among 65 women they were assessing the position in the first stage of labour are those avoid that and include sits, squatting or kneeling position and being on hands and knees. The study results show that upright position for labour experience decreased pain, fewer fetal heart rate abnormalities and

shortens second stage of labour. The main result of this systemic review suggests that encouraging women to adopt position or two during the first stage of labour reduces its duration.

Pain perception is perceived by the parturient is determined by physical and psychological factors. The cross sectional study was conducted by Olayami et al (2006) in Ibadan from August 2003 to July 2004 among 765 primiparturient to assess the westernization through education increases pain perception of women using a questionnaire with the box numerical scale to assess the pain score within the 48 hours of delivery. In conclusion, the findings in this study show that westernization through education tends to increase of pain perception of pain by parturient in the environment.

Niven (2002) was performed to assess the memories of labour pain a evoke intense negative reactions in fewer women. They were assigned 25 women in the control group and 25 women were in the experimental group. The result review that inductive and deductive analysis suggested that women do not forget labour pain, and recall is often vivid but not always entirely accurate. The result concluded that memories of labour pain evoke intense negative action in a few women, but more likely to give rise to positive consequence related to coping, self-efficacy and self-esteem.

Literature related to Pain Management in Labour

Jones, 2012 systemic review performed to find out the efficacy and safety of non-pharmacological and pharmacological interventions to manage pain in labour. Among 100 women 50 women were in control group and 50 women were in the experimental group. These interventions relieved pain and improved satisfaction with

pain relief measures. The trial concluded that most methods of non-pharmacological pain management were non -invasive and appears too safe for mother and baby. There is more evidence to support the efficacy of pharmacological methods, but these have more adverse effects to baby.

In the year 2011, randomized control trial was performed by Smith to find out the aromatherapy on pain management in labour and coping ability. First trials involved 513 women bath with lavender oils with standard care and also second trails involved 22 women bath essential oil of ginger. All women received routine care and had access to pain relief. Comparison of two groups there is insufficient evidence from randomized controlled trials about the benefits armotherphy on pain management of labour. More research is needed.

In the year 2010, randomized control trial was performed by Chosh, to find out the acupuncture on pain management in labour. Trails involving 2038 women were included. Visual analogue scale assessments were used to evaluate the subjective effect on pain. The trial concluded that compared with no intervention, acupuncture reduced pain. In trials where acupuncture was effective compared with conventional analgesia, women receiving acupuncture required that less Meperidine and other analgesic methods.

In the year 2010, quasi experimental study performed by Mahboubeh, to find out the effectiveness of Reflexology upon labour pain. Trails were involving 88 women using Reflexology. Data collection tools were the demographic questionnaires, McGill questionnaire's for the pain rating index were used to evaluate the subjective effect on

pain. The trials concluded that there was no significant difference between groups, there was a significant difference between the pain rating index before and after the intervention Reflexology can lead to decrease in the pain in labour.

In the year 2005, meta-analysis was performed by Smith to find out the effectiveness of complementary medicine on maternal satisfaction use of pharmacological pain relief methods and maternal and neonatal outcome. Seen trails involving 366 women and using different modalities of pain management were included in this review. The trials included acupuncture, Audio Analgesia, armotherphy, music. The trials concluded that compared to pharmacological measures non pharmacological measurably more effective pain management for labour pain.

Cynal. (2004) five randomized control trail and 14 non-randomized comparisons studying 8395 women were identified where hypnosis was used for labour analgesia. Four randomized control trial was included 224 patients examined the primary outcomes of interest. The study concluded that non randomized control trail one showed that women receiving hypnosis rated their labour pain less severe than controls and reduced Opioids requirement and increased incidence of not requiring pharmacological analgesia in labour.

Literature related to Audio Analgesia

Finlay (2009) conducted randomized controlled trials among 98 patients scheduled for primary total knee arthroplasty were randomly allocated at their pre admission clinic to one of four music listening groups, receiving commercially available music. The participants in high / low harmonistic and rhymicity music group were

compared against a silent control group receiving quite relaxation (with headphones). Results revealed that significant reduction in pain intensity from pre to post test shown to all participants.

A systemic review of randomized controlled trials was performed by Klassen in the year of 2008 to assess the efficacy of White Sea sound on pain and anxiety in children undergoing clinical procedures. The Audio analgesia therapy included children aged 1 month to 18 years were examined among 1513 children's. The results reviewed that Audio Analgesia was effective in reducing anxiety and pain in children during medical and dental procedure.

Koh (2005) was performed to assess the effects of Audio Analgesia on pain perception of stroke patients during upper extremity joint exercise. Among 10 patients ranging in age from 61 to 73 participated in the study. The intervention group received music without lyrics and a control group received routine care. The study concludes that intervention group got positive effects and verbal responses, while performing upper extremity exercise.

Randomized clinical trial was performed by Anderson in the year of 2005 a non-pharmacological nursing intervention, relaxation and music and their combination were tested for pain relief following intestinal surgery among 167 patients were randomly assigned to one of three intervention group and control group were tested during ambulation and rest on post-operative days and pain sensation and distress were measured with visual analogue scale. The result revealed that multivariate analysis of

covariance showed significantly less post-test pain in the intervention group than the control group.

Weisbrod (2002) meta-analysis was performed to assess the effect on Audio analgesia upon patient underwent dental procedure. Among 10,000 dental patients successfully employed in 90% of 5000 dental operations and 77% of 4500 operations performed by dentists who perceived Audio Analgesia machine were successful. The study concluded that Audio analgesia be effective in 95% of patients underwent minor dental procedure and 85% of average procedure and 67% of major procedure.

Literature related to Audio Analgesia upon labour pain.

Randomized control design was performed by Liu Yh in the year of 2010, to find out the Audio Analgesia for pain management in labour maternal morbidity. Trails involving 60 primiparous women expected to have a normal spontaneous delivery were randomly assigned to either the experimental group 30 or control group 30. Here experimental group received sea white sound with help of headset. The study concluded that experimental group received routine care and Audio Analgesia, whereas the control group received routine care only. Results reviewed that compared with the control group; experimental group had significantly lower pain and anxiety.

Winerman (2006) meta-analysis performed to find out the Audio Analgesia for pain management in labour on maternal and perinatal morbidity. Visual analogue scale assessments were used to evaluate the subjective effect on pain. Trails involving 1537 women using Audio Analgesia for labour pain management. The study concluded that experimental group received routine care and Audio Analgesia, whereas the control

group received routine care only. The trials concluded that women receiving Audio Analgesia reduce the labour pain in the first stage of labour.

In the year of 2003 randomized control trial was performed by Phumdoung to assess the effects of Audio Analgesia on the sensation and distress of pain in Thai primiparous women during the active phase of labour. Trails involving 55 women in intervention group and control group 55. In this study women in the intervention group listened to soft music without lyrics for 3 hours starting early in the active phase of labour. The study concluded that women in intervention group less pain compared to control group.

Smith (2003) meta-analysis performed to assess the effectiveness of alternative modalities during labour to reduce labour pain among women in the first stage of labour. Seven trials involving 366 women and using different modalities of pain management during labour. The trail included that one involving acupuncture n=100, one involving Audio Analgesia n=25, one involving armotherphy n=20, 3 trails of hypnosis n=189 and one trail of music n=30. The study was concluded that women receiving alternative modalities were more satisfied less pain management in labour with controls.

McCowan (2002) randomized control trail to find out the effects of Audio Analgesia upon labour pain. The subject was randomly assigned to either music (n=20) group or control group (n=20). In this study numerical pain intensity scale was used to assess the subjective pain level. The study concluded that women in the music group perceived significantly less pain during labour.

In England one trail of audio analgesia was performed by Witoon in the year of 2000. They were assigned 25 women, 24 women completed the trail. Women were randomized to receive Audio- Analgesia which consisted of 'sea noise′ white sound set at 120 decibels or to the control group who received sea noise at a maximum 90 decibels. The findings reported that Audio Analgesia seems to reduce pain during first stage of labour in parturient women.

Summary

Review of literature includes primary sources and secondary sources. Primary sources include 16 and secondary sources 4 included in this review of literature.

CHAPTER III

RESEARCH METHODOLOGY

The research methodology of the research study is defined as the way the data are gathered in order to answer the questions to analyse the research problem. It enables the researcher to project blue print of the research undertaken.

This chapter deals with the methodology adopted by the researcher for the study includes research approach, research design, the setting, population, sample and sampling techniques, development and description of the tool, validity, reliability, pilot study, data collection procedure, plan for data analysis

.

Research Approach

According to Polite and Beck (2008) experimental research is an applied form of research and involves findings out how well a program and practice of policy is working. Its goals are to access or evaluate the success of the intervention.

The research approach explains the basic procedure for the conduct of research inquiry. The present study experimental research approach is used.

It also suggest possible conclusion to be draw from the data in view of the nature of the problem under study and to accomplish the objectives of the study.

Research Design

The research design is the plan, structure and strategy of investigation of answering the research question. It is the overall plan or blueprint to the researcher to

select and to carry out the study. According to polite and Hunger (1999), true experimental research is an experimental design with a goal to assess the effectiveness of a program, where manipulation, control group, randomization is present.

Time series design with multiple intuitions was used in this study

R O1 X O2, O3 X O4, O5 X O6, O7 X O8, O9 X O10.

R O1 - O2, O3 - O4, O5 - O6, O7 - O8, O9 - O10.

R	-	Randomization
O1 O3 O5 O7 O9	-	Assessment before administration of Audio Analgesia every 1 to 2 hours
X	-	Administration of Audio Analgesia for every 1 to 2 hours
O2 O4 O6 O8 O10	-	Assessment after administration of Audio Analgesia every 1 to 2 hours

Variables

Variable is anything that can change or anything that is liable to vary. For instance, age can be considered a variable because age can take different values for different people or for the same person at different times.

Independent variable

The variable that is believed to cause or influence the dependent variable is called independent variable. In this study Audio Analgesia is the independent variable. Audio Analgesia is the auditory stimulation it is a White Sea noise with duration of 15

to 20 minutes and interval of 1 to 2 hours by using headphone to assess the changes in the pain level.

Dependent variable

The variable hypothesized to depend on or be caused by independent variable is the dependent variable. Labour pain and coping are the dependent variable in the study. The level of labour pain and coping are assessed every 1 to 2 hours before and after Audio Analgesia during the latent and first stage of labour.

Extraneous variable

The variable that confounds the relationship between the independent variable and dependent variable and that needs to be controlled either in the research design or through statistical procedures in the extraneous variables. Demographic variables and obstetric variables are extraneous variables.

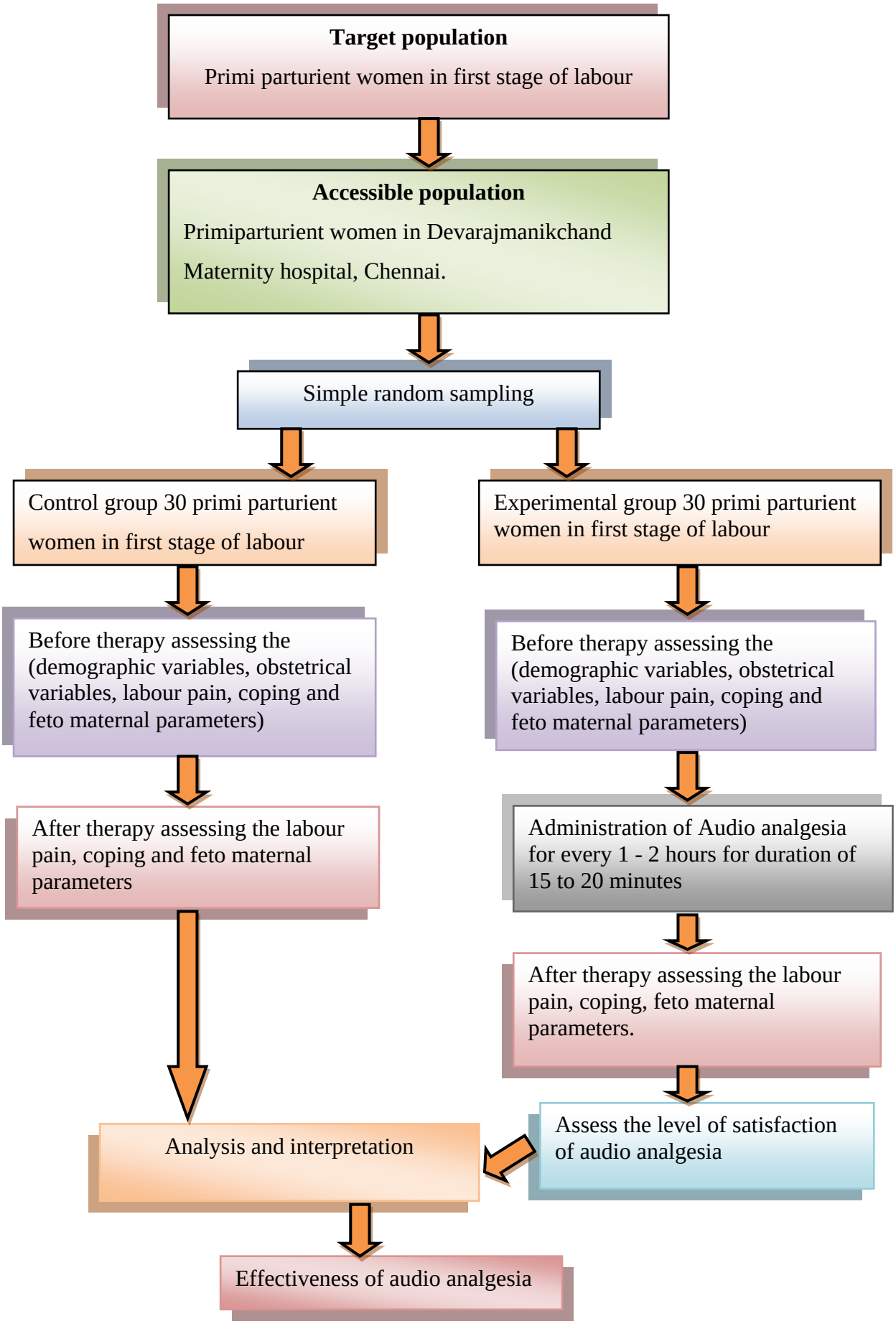

Fig.2 Schematic Representation of Research Design

Research Setting

The study was conducted at the Devaraj Manikchand Maternity Hospital at Sowkarpet which is a semi urban area of Chennai. The hospital is 150 bedded hospitals which have labour room with four labour table and equipment's like a Cardiotocography machine, warmer and lifesaving drugs and equipment's for obstetrical and medical emergencies. On an average 80 to 100 undergo normal vaginal delivery every month. The hospital also has postnatal ward, postoperative ward, Neonatal intensive care unit, operation theatre, labouratory and other diagnostic procedure like scanning. They also provide immunization and conducts teaching programs for the staffs and patient and do referral to government agencies is needed.

Population

Population is the entire aggregation of cases which meet designated set of criteria. The target population is the group of population the researcher aims to study and to whom the study findings was generalized. In this study, the target population comprises of all the parturient women who satisfy the inclusion criteria.

In this study accessible population is primiparturient women who are 36-42 weeks of gestation admitted in selected hospital Chennai.

Sample

Sample consist of the subset of units it comprises the population (Polite & Beck 2004). A sample of 60 primiparturient women in the first stage of labour was selected among which 30 primiparturient was randomly assigned to the control group and 30

primiparturient women were assigned to the experimental group. As sample consists of primiparturient women who were inclusion criteria in selected hospital Chennai were selected for the study.

Sampling Technique

Sampling is the process of selecting a portion of population to represent the entire population (Polite & Beck 2006). Simple random sampling technique was used for the women who satisfy the inclusion criteria were the odd number parturient women were assigned to control group and the even number parturient women were assigned to the experimental group.

Sample Size

A sample size for the present study was 60 primiparturient women. Among 30 in control group and 30 in experimental group.

Sampling Criteria

Inclusion criteria

The study includes primiparturient women were

- Who were the parturient women
- Gestational age after 36-42 weeks of gestation
- Who were willing to participate
- Able to understand and speak English or Tamil

Exclusion criteria

The study excluded

- Had any medical disorder

- Underwent any painful procedure
- Had undergone surgery
- Not willing to participate in this study

Selection and Development of Study Instruments

The study aimed at evaluating the effectiveness of Audio-Analgesia upon reducing labour pain.

Data collection instruments are developed via extensive review of literature and consultation with experts and guidance of faculty members. The instrument used in this study were demographic variable Performa, obstetrical variable Performa, 0-10 numeric pain intensity scale, Pain coping scale, rating scale for level of satisfaction on audio-analgesia, modified WHO Partograph.

Demographic variable proforma for primiparturient women

Demographic variable proforma contains age, religion, educational qualification, type of work, type of family, area of residence, and previous information regarding Audio analgesia and if yes source of information.

Obstetrical variable proforma for primiparturient women

Obstetrical variable proforma contains gestational age in weeks, gravida, number of antenatal visits, conditions during antenatal period, pain management during first stage of labour, type of delivery, duration of first stage of labour and fetal complications**.**

Pain rating scale for primiparturient women

0-10 pain intensity scale was used to assess the level of pain perceived by parturient women before and after Audio Analgesia during the first stage of labour.

Pain coping scale for primiparturient women

The pain coping scale was used to assess the pain coping level of the parturient women before and after Audio Analgesia during the first stage of labour

Modified WHO Partograph for primiparturient women

This graph consists of fetal heart rate, maternal heart rate, maternal blood pressure, cervical dilatation, frequency and duration of uterine contraction.

Rating scale on level of satisfaction of Audio Analgesia upon labour pain

The rating scale was designed to assess the level of satisfaction of the primiparturient women regarding Audio Analgesia and this was assessed after delivery.

The satisfaction scale was classified into 3 levels.

Score	Percentage	Level of satisfaction
1-30	≤50%	Low satisfaction
31-45	51-75%	Moderate satisfaction
45-60	≥76%	Highly satisfied

Psychometric Properties of Instruments

Validity of the Instruments

Content validity of the tool was obtained getting opinion from several experts in the field of obstetrics and gynaecology. Three of the experts were nursing personnel and

one biostatistian. The evaluators have suggested some specific modification in the objectives and rating scale. The modification and suggestion of experts were incorporated in the final preparation of the rating scale to assess the level of satisfaction of Audio Analgesia among parturient women.

Reliability of Study Instruments

The reliability of the tool was elicited by using the inter ratter technique, Karl Pearson is computed to find out the reliability. For pain scale, the 'r ' value is 0.9 which shows positive correlation, indicates that the tools are highly reliable.

Pilot study

Polite and Hunger (2004) states that which pilot study is administration of some parts of actual study in which the instruments are administered to the subjects to draw from the same population. It is a small scale version or trail run do prepare for a major study. The purpose is to find out the feasibility and practicability of the study

Pilot study was conducted in Devaraj Manichand Maternity Hospital, Chennai, from 12th June to 23rd June 2012. They were assigned in control and experimental group .The subjects were choosing systematic random sampling at Devaraj Manichand Maternity Hospital using the demographic variable proforma, obstetrical proforma, pain intensity rating scale, pain coping scale, fetomaternal parameters, modified WHO Partograph and rating on satisfaction data was collected and analysed. The study was found to be feasible, acceptable and easy to understand by the primiparturient women.

Protection of Human Rights

The study was conducted

- After approval of ethical committee of Apollo hospitals
- After obtaining permission from Dr. Latha Venkatesen. Principal of Apollo college of Nursing, HOD of Obstetrics and Gynecological nursing and
  Sr. Josephine, the in charge of Devaraj manikchand maternity hospital.
- After obtaining written consent from the participants
- With confidentiality maintained throughout the study.

Data Collection Procedure

The data collection is the gathering of information needed to address a research problem. The study was conducted in Devarajmanikchand Maternity Hospital from 12th June to 23rd June 2012.

Researcher has selected the samples who met the inclusion criteria. Consent was obtained from the participants after proper explanation. Pretest was conducted for control and experimental group using pre- tested tools (Pain intensity scale, Pain coping scale, WHO modified parto graph and rating scale) by interview method using interview shedule.

Sixty primi parturient women with the first stage of labour were selected using simple random sampling technique. They were assigned 30 each in control and experimental group. Auditory stimulation that is recorded sea white noise was given to the primiparturient women in experimental group by using the headphone in the first stage of labour with duration of 15 to 20 minutes with interval of 1 to 2 hours was given and it was repeated with same duration and interval till women reaches the second stage

of labour The post test was assessed after Audio Analgesia for both control and experimental group of primiparturient women . Satisfaction was assessed by using satisfaction scale in experimental group

Problem Faced During Data Collection

During data collection procedure, the problem faced by the researcher few Primiparturient women were not willing to participate in the study, because they felt discomfort every hour to fill the scale.

Plan for Data Analysis

Data analysis is the systematic organization, synthesis of research data and testing of null hypothesis by using the obtained data (Polite and Beck, 2004). Analysis and interpretation of the data were carried out by using descriptive and inferential statistics.

Descriptive statistics such as mean, frequency and percentage was used 't' test used to assess the demographic variables, obstetrical variable, 0-10 numeric pain intensity scale, satisfaction rating scale.

Inferential statistics such as paired ‘t’ test, and independent ‘t’ test was used to assess the effectiveness of Audio-Analgesia on level of reducing labour pain by comparing the pre-test and post-test level of control and experimental group. The chi - square test was used to find out the association between selected demographic variable

and level of reducing labour pain in control and experimental group of parturient women.

Summary

This chapter dealt with the research approach, research design, setting, population, and sample, sampling technique, sampling criteria, development of study instruments, reliability and validity of the instruments, pilot study, data collection procedure and plan for data analysis.

CHAPTER IV

ANALYSIS AND INTERPRETATION

Statistics are aggregates of facts, affected to a marked extent by a multiplicity of causes, numerically expressed, enumerated or estimated according to reasonable standards of accuracy, collected by systematic manner for a predetermined purpose and placed in relation to each other (Aggarwal, 2010).

The data were collected from 60 primary parturient women among which 30 were in the control group and 30 were in the experimental group. The data were analyzed using descriptive and inferential statistics based on the objectives and hypothesis. The data analysis was completed after transferring all the data to the master coding sheet.

Organization of Findings

- Frequency and percentage distribution of demographic variables, Obstetric variables, level of labour pain, level of coping, level of satisfaction before and after Audio Analgesia in the control and experimental group of parturient women.
- Comparison of mean and standard deviation of level of labour pain, level of coping and fetal maternal parameters before and after Audio Analgesia in the control and experimental group of parturient women
- The association between selected demographic variables and the level of labour pain, coping, selected Obstetric variables and the level of labour pain, coping before and after Audio Analgesia among parturient women in the control and experimental group.

Table 1

Frequency and Percentage Distribution of Demographic Variable in Control and Experimental Group of Primiparturient Women.

Demographic variables	Control Group n=30		Experimental Group n=30	
	n	p	n	p
Age in years				
<20	1	3.3	2	6.7
21 - 25	23	76.7	23	76.7
26 - 30	6	20	1	3.3
≥ 31	-	-	4	13.3
Religion				
Hindu	24	80	21	70
Christian	6	20	5	16.7
Muslim	-	-	4	13.3
Others	-	-	-	-
Education				
Illiterate	-	-	10	33.3
Primary school	4	13.3	2	6.7
High school	9	6.7	6	20
Higher secondary	15	50	7	33
Graduate and above	9	30	5	16.7

Type of family				
Nuclear	13	43.3	20	66.7
Joint	17	56.7	10	33.3
Area of residence				
Urban	29	96.7	25	83.3
Rural	1	3.3	5	16.7
Semi urban	-	-	-	-
Previous information regarding audio analgesia during the visit				
Yes	18	60	20	66.7
No	12	40	10	33.3
If yes source of information is from				
Media	7	23.3	11	36.7
Neighbours	-	-	2	6.7
Health professional	10	33.3	7	23.3
Family members	-	-	-	-
None	13	43.4	10	33.3

Table 1 reveals that majority of the women were between the age group of 21 – 25 years (76.7%, 76.7%), were Hindu (80%, 70%) with secondary education (80%, 70%) were home makers (86.7%, 76.7%) resided in urban areas (96.7%, 83.3%)

and most of them had previous information about Audio Analgesia (60%,66.6%) in control and experimental group respectively.

Figure 3 shows that majority of them were moderate workers (86.7%, 90%) in both the control and experiemental group respectively.

Figure 4 infers that most of the women belonged to nuclear family (43.3%, 66.7%) in control and experimental group respectively.

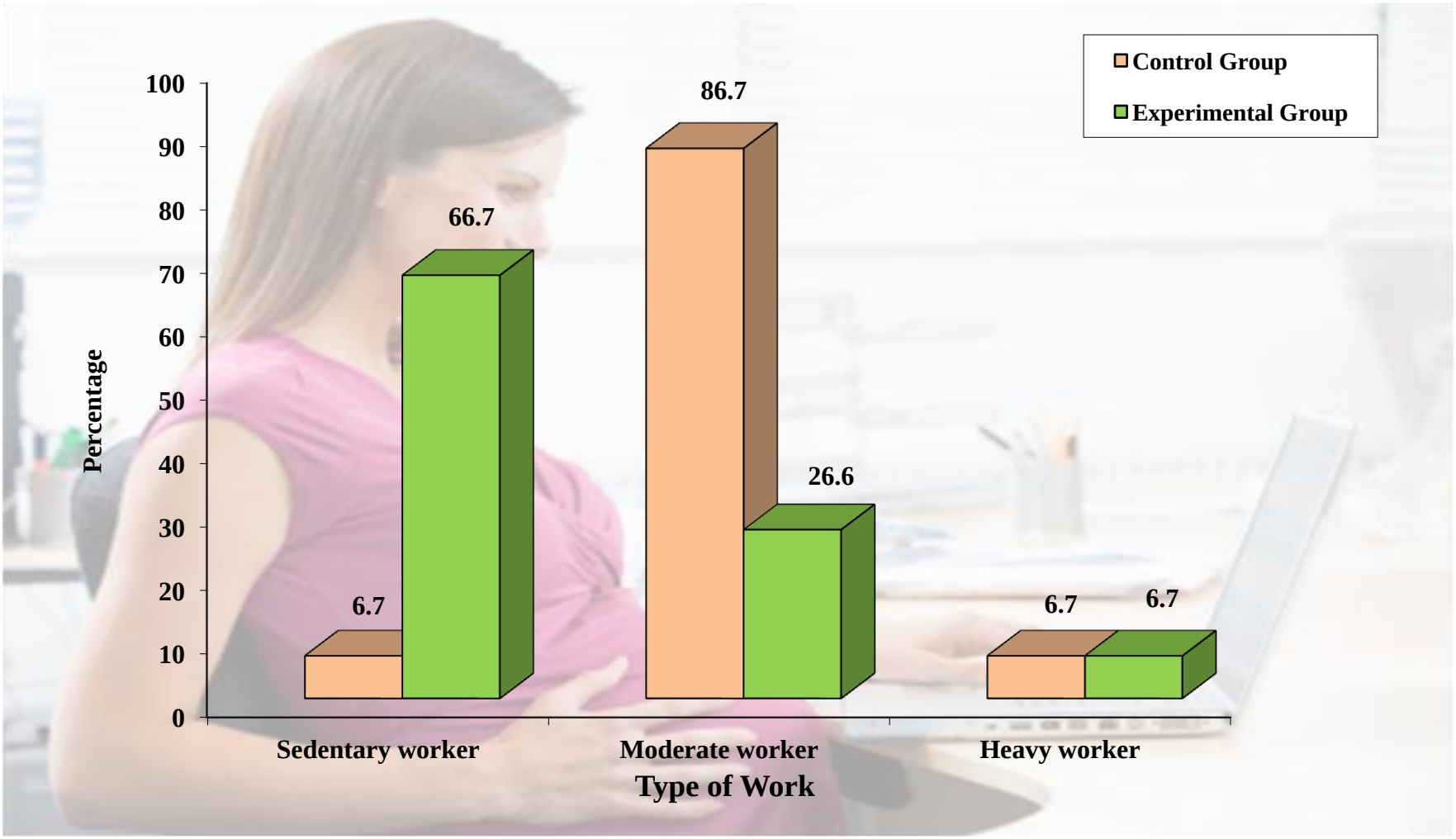

Fig.3 Percentage distribution of Type of Work in Control and Experimental Group of primiparturientt Women

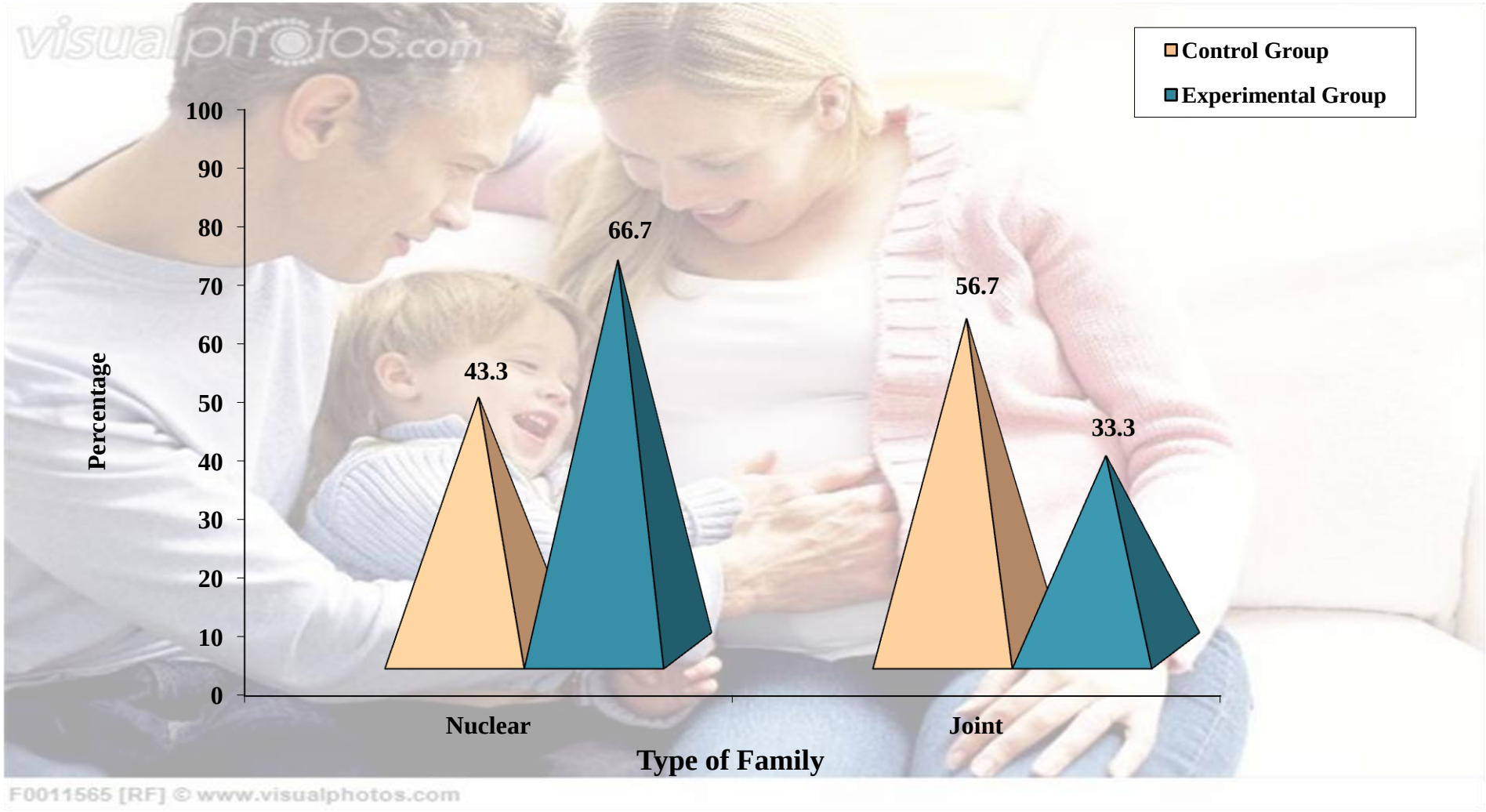

Fig.4 Percentage distribution of Type of Family in Control and Experimental Group of primiparturient Women

Table 2

Frequency and Percentage Distribution of Obstetric Variables in Control and Experimental Group of Primiparturient women.

Obstetric variables	Control Group n=30		Experimental Group n=30	
	n	p	n	p
Gestational age (in weeks)				
37 - 39	25	83.3	20	66.7
40 - 42	5	16.7	10	33.3
Gravida				
1	30	100	30	100
2	-	-	-	-
3	-	-	-	-
Number of antenatal visits till date				
No visit	-	-	-	-
1 to 3 times	7	23.3	5	16.7
> 3 times	23	76.7	25	83.3
Conditions during antenatal period				
Anemia	-	-	-	-
Pregnancy induced	-	-	-	-

hypertension				
Gestational diabetes mellitus	-	-	-	-
Nil	30	100	30	100
Pain management during first stage of labour				
Systemic analgesia	-	-	-	-
Inhalational analgesia	-	-	-	-
Epidural analgesia	-	-	-	-
Combined epidural analgesia	-	-	-	-
Nil	30	100	30	100
Fetal complication				
Prolapsed cord	-	-	-	-
Respiratory syndrome	-	-	-	-
Meconium aspiration syndrome	-	-	-	-
Asphyxia neonatrum	-	-	-	-
None	30	100	30	100

The data presented in Table 2 depicts that all of them were primigravida with no complication during the antenatal period, none of them received any type of pain management during labour and there was no fetal complications during delivery. The majority of the women was between the gestational ages of 37 – 39 weeks (83.3%,

66.7%), had more than five antenatal visits (76.7%, 83.3%) and underwent normal vaginal delivery (66.7%, 80%) in control and experimental group respectively.

Figure 5 shows that most of the women had duration of the first stage of labour between 10 – 12 hours (60%, 70%) in control and experimental group respectively.

Figure 6 shows that majority of the women had type of delivery (66.7%, 80%) in control and experimental group respectively.

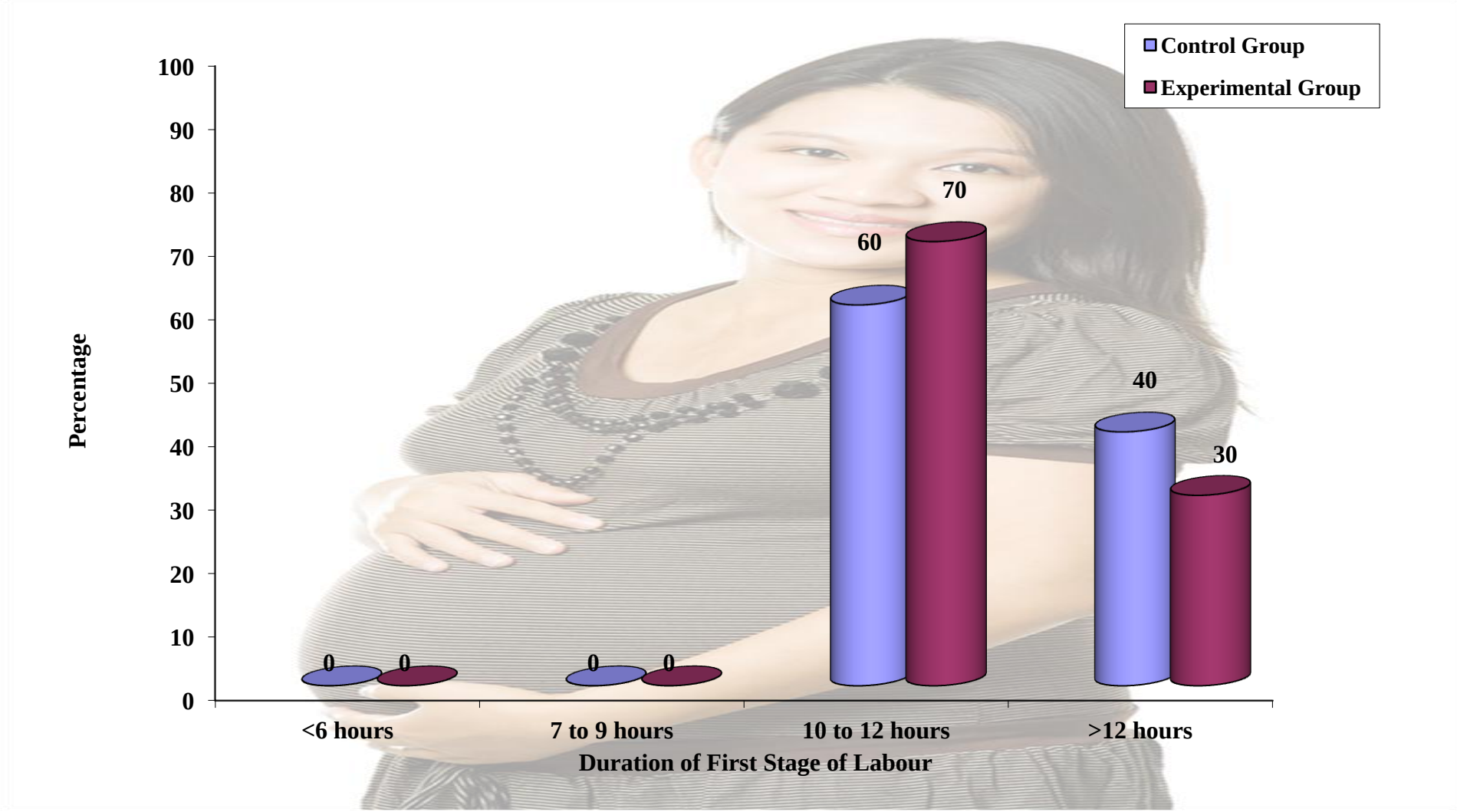

Fig.5 Percentage distribution of Duration of First Stage of Labour in Control and Experimental Group of Parturient Women

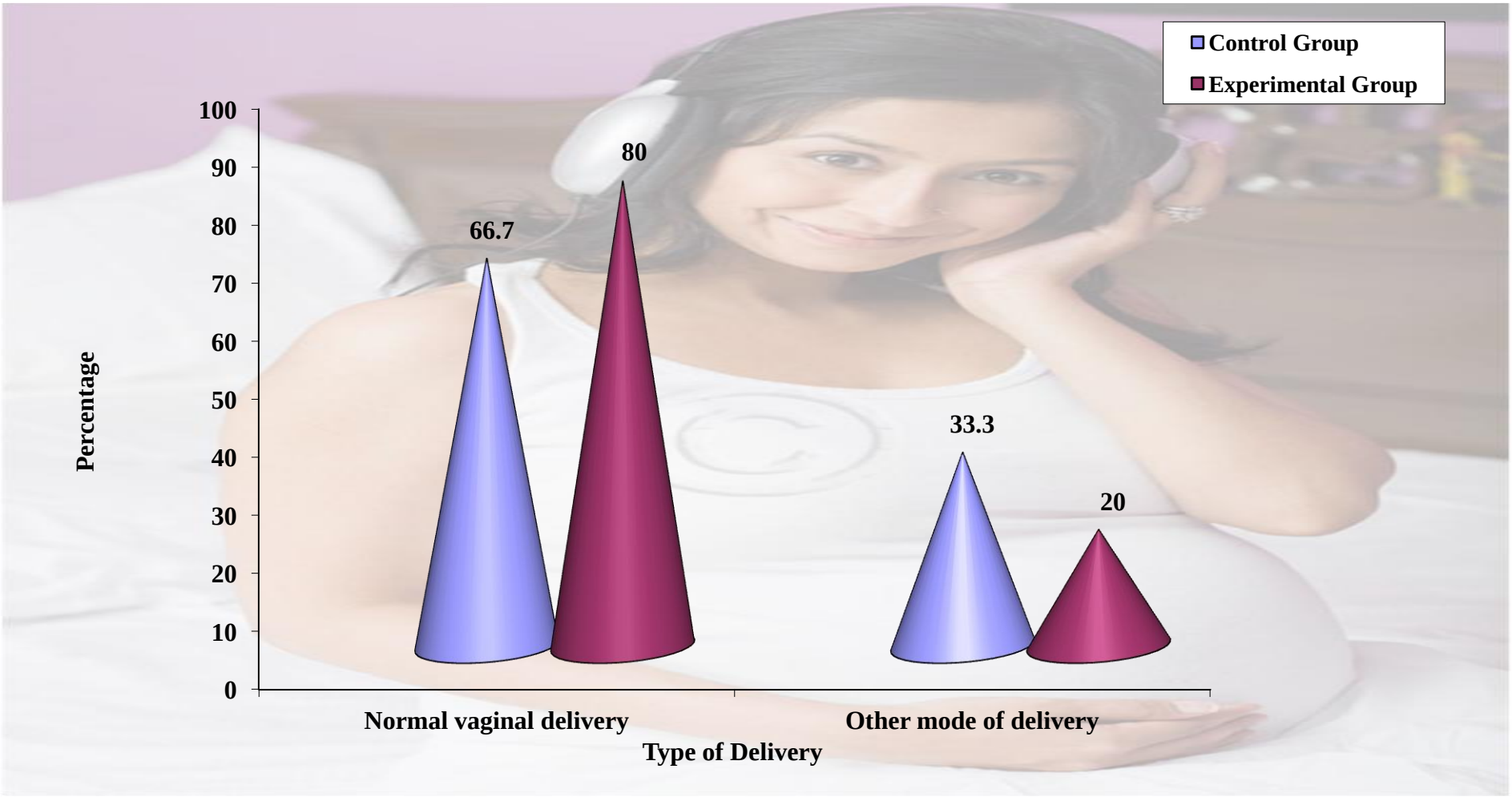

Fig.6 Percentage distribution of Type of Delivery in Control and Experimental Group of primiparturient Women

Table 3

Frequency and Percentage Distribution of Level of Labour Pain Before and After Audio Analgesia in Control and Experimental Group of Primiparturient Women.

Level of labour pain	Before therapy n=30		After therapy n=30	
	n	p	n	p
Control group				
No pain	-	-	-	-
Mild pain	-	-	-	-
Moderate pain	30	100	9	30
Severe pain	-	-	21	70
Experimental group				
No pain	-	-	-	-
Mild pain	-	-	-	-
Moderate pain	-	-	25	83.3
Severe pain	30	100	5	16.7

Table 3 reveals that the majority of the primiparturient women in the control group had severe pain (100%, 70%) before and after therapy respectively whereas the experimental group of primiparturient women had moderate pain (83.3%) after therapy when compared with before therapy where all the women had severe pain (100%).

Table 4

Frequency and Percentage Distribution of Level of Coping Before and After Audio Analgesia in Control and Experimental Group of Primiparturient Women.

Level of coping	Before therapy n=30		After therapy n=30	
	n	p	n	p
Control group				
No need to cope	-	-	-	-
Easy	-	-	-	-
Able to do 3 Rhythm, Relaxation and Ritual	-	-	-	-
Need of the lot	30	100	9	30
Can't do it	-	-	21	70
Experimental group				
No need to cope	-	-	-	-
Easy	-	-	-	-
Able to do 3 Rhythm, Relaxation and Ritual	-	-	25	83.3
Need of the lot	30	100	5	16.7
Can't do	-	-	-	-

It can be interpreted from Table 4 that most of the primiparturient women in the control group needed help before therapy (70%) and (100%) of them after therapy whereas in the experimental group majority of them were able to do 3R's- Rhythm, Ritual and relaxation (83.3%) before therapy when compared with after therapy where all the parturient women needed lots of help (100%).

Table 5

Comparison of Mean and Standard Deviation of Level of Labour Pain Before and After Audio analgesia in Control and Experimental Group of Primiparturient Women.

Group	Mean	SD	't' value
	n=60		
Control group			
Before therapy	5.4	0.37	
After therapy	5.5	0.77	7.29
Experimental group			
Before therapy	4.74	0.44	15
After therapy	3.4	0.34	

***P< 0.001

Table 5 depicts that the mean pain level in the control group was high after therapy (M=5.5, SD=0.77) compared to before therapy (M=5.4, S.D=0.37) whereas the mean value of pain was low (M=3.4, SD=0.34) after therapy in the experimental group when compared with before therapy (M=4.74, SD=0.44). The level of confidence was 99.9% and it shows the effectiveness of Audio analgesia upon labour pain. Hence the null hypothesis H_{01} was rejected.

Table 6

Comparison of Mean and Standard Deviation of Level of Coping Before and After Audio analgesia in Control and Experimental Group of Primiparturient Women.

Group	Mean	SD	't' value
	n=60		
Control group			
Before therapy	4.6	1.29	2.27
After therapy	3.8	0.44	
Experimental group			
Before therapy	4.3	0.94	13.9
After therapy	5.2	0.38	

***P< 0.001

Table 6 infers that the mean coping level was low after therapy (M=3.8, SD=0.44) in comparison to before therapy (M=4.6, SD=1.29) in the control group whereas the mean coping level was found to be high after therapy (M=5.2, SD=0.38) in comparison with before therapy (M=4.3, SD=0.94) of the experimental group. Thus the effectiveness of Audio analgesia was statistically proved at the 99.9% level of confidence. Hence the null hypothesis H_{01} was rejected.

Table 7

Comparison of Mean and Standard Deviation of Feto Maternal Parameters Before and After Audio Analgesia in Control and Experimental Group of Primiparturient Women.

Feto maternal parameters	Before Therapy n=60		After Therapy n=60	
	M	SD	M	SD
Control group				
Fetal heart rate	148	2.45	147.6	3.34
Maternal pulse rate	87.87	3.01	87.4	1.64
Uterine contraction	2.5	0.5	3.9	0.11
Cervical dilatation	10	4.78	10	5.3
Systolic Blood Pressure	120	3.1	119	2.24
Diastolic Blood Pressure	76.2	3.2	76.27	3.23
Experimental group				
Fetal heart rate	149	4.57	150	4.8
Maternal pulse rate	86.03	2.34	85.5	2.2
Uterine contraction	3	0.22	4	0.14
Cervical dilatation	10	3.21	10	3.51
Systolic Blood Pressure	118	2.12	117.5	4.14
Diastolic Blood Pressure	75.1	3.6	70	3.38

It can be depicted from the Table 7 that in the control group, uterine contraction (M=3.9, SD=0.11; M=4, SD=0.14) and cervical dilatation (M=10, SD=5.3; M=10, SD=3.51) were increased after therapy in comparison with before therapy at 95% level of confidence. Whereas the systolic blood pressure before and after therapy were (M=120, SD= 3.1; M=118, SD=2. 24) and (M=119, SD=2. 24; M=117. 5, SD=4. 14) and diastolic blood pressure before and after therapy were (M=76. 2, SD=3. 2; M=70. 1, SD=3. 6) and (M=76. 27, SD=3. 23; M=70, SD=3. 38) in the control and experimental group of primiparturient women respectively which shows that Audio analgesia was effective in reducing the frequency of uterine contraction and the difference in the experimental group was statistically proved at 99.9% level of confidence.

Table 8

Frequency and Percentage Distribution of Level of Satisfaction on Audio Analgesia in Experimental Group of Primiparturient Women.

Level of Satisfaction	Experimental Group n=30	
	n	p
Highly satisfied	18	60
Moderately satisfied	11	37
Just satisfied	1	3
Dissatisfied	-	-

The data from the Table 8 shows that most of the participants in the experimental group were highly satisfied (60%) with Audio analgesia during the first stage of labour and none of them reported dissatisfaction towards the intervention.

Table 9

Association between the Selected Demographic Variables and Level of Labour Pain after Therapy in Control Group of Primiparturient Women.

Demographic variable	Level of pain n=30		df	χ^2
	Moderate pain	Severe pain		
Age in years				
<20	2	25		
21 - 25	1	2	1	1.6
26 - 30	-	-		
≥ 31	-	-		
Religion				
Hindu	3	14		
Christian	2	10		
Muslim	1	-	1	0.8
Others	-	-		
Education				
Illiterate	-	-		
Primary school	3	20		
High school	1	2	2	0.8
Higher secondary	1	1		
Graduate & above	2	-		

Type of work				
Sedentary worker	5	23		
Moderate worker	-	2	1	3.3
Heavy worker	-	-		
Type of family				
Nuclear	4	20		
Joint	1	5	1	0.13
Area of residence				
Urban	2	15		
Rural	-	-	1	1.03
Semi urban	3	10		
Previous information regarding audio analgesia during the visit				
Yes	3	20		
No	2	5	1	0.1
If yes source of information is from				
Media	4	10		
Neighbors	-	-	1	0.5
Health professional	2	5		
Family members	-	-		
None	4	5		

*p<0.05

From the data presented in Table 9 it could be revealed that there was no significant Association between age, religion, educational qualification, type of work, type of family, area of residence, previous information regarding Audio analgesia with the level of labour pain after therapy in the control group of primiparturient women. Hence the null hypothesis H_{01} was accepted. No statistics could be applied to find out the association between selected demographic variables and the level of labour pain before therapy in the control group since the frequency of moderate pain was zero.

Table 10

Association Between the Selected Demographic Variables and Level of Labour Pain After Therapy in Experimental Group of Primiparturient Women.

Demographic variable	Level of labour pain n=30		df	χ^2
	Moderate pain	Severe pain		
Age in years				
<20	25	2		
21 - 25	2	1	1	0.1
26 - 30	-	-		
≥ 31	-	-		
Religion				
Hindu	20	2		
Christian	4	3	1	0
Muslim	-	1		
Others	-	-		
Education				
Illiterate	-	-		
Primary school	10	5		
High school	5	3	2	2.5
Higher secondary	-	2		
Graduate and above	5	-		

Type of work				
Sedentary worker	10	2		
Moderate worker	10	3	2	0.07
Heavy worker	5	-		
Type of family				
Nuclear	10	3	1	0.7
Joint	15	2		
Area of residence				
Urban	20	2		
Rural	-	-	1	0
Semi urban	5	3		
Previous information regarding audio analgesia during the visit				
Yes	20	3		
No	5	2	1	0.7
If yes , source of information is from				
Media	5	2		
Neighbors	-	-		
Health professional	10	5	1	1.2
Family members	-	-		
None	5	3		

*p<0.05

Table 10 shows that there was no significant Association between age, religion, educational qualification, type of work, type of family, area of residence, previous information regarding Audio analgesia with the level of labour pain after therapy in the experimental group of parturient women. Hence the null hypothesis H_{02} was accepted. Since the frequency of having moderate pain before therapy was zero, no statistics could be applied to find out the association between selected demographic variables and level of labour pain.

Table 11

Association Between the Selected Demographic Variables and Level of Coping After Therapy in Control Group of Primiparturient Women.

Demographic Variables	Level of coping n=30		df	χ^2
	Needs lot of help	Able to do 3 R's		
Age in years				
>20	-	-		
21 - 25	18	6		
26 - 30	2	2	2	0.5
≥ 31	2	-		
Religion				
Hindu	16	5		
Christian	4	5	1	0.3
Muslim	-	-		
Others	-	-		
Education				
Illiterate	18	4		
Primary school	2	2	2	0.017
High school	2	2		
Higher secondary	-	-		
Graduate and above	-	-		

Type of work				
Sedentary worker	10	5		
Moderate worker	15	-	1	0.05
Heavy worker	-	-		
Type of family				
Nuclear	19	5		
Joint	1	5	1	0.7
Area of residence				
Urban	15	5		
Rural	5	5	1	0
Semi urban	-	-		
Previous information regarding audio analgesia during the visit				
Yes	12	5	1	0.5
No	13	-		
If yes, source of information is from				
Media	5	5		
Neighbors	10	2		
Health professional	5	-	2	0.5
Family members	-	-		
None	3	-		

*p<0.05

It can be interpreted from the Table 11 that there was no significant Association between age, religion, educational qualification, type of work, type of family, area of residence, previous information regarding Audio analgesia with the level of coping after therapy in the control group. Hence the null hypothesis H_{O2} was accepted. As the frequency of samples who were able to do 3R's (rhythm, ritual and relaxation) was zero before therapy so no statistics could be applied to find the association.

Table 12

Association Between the Selected Demographic Variables and Level Of Coping After Therapy in Experimental Group of Primiparturient Women.

Demographic Variables	Level of Coping n=30		df	χ^2
	Needs lot of help	Able to do 3 R's		
Age in years				
<20	-	-		
21 - 25	6	18		
26 - 30	2	2	2	0.10
≥ 31	-	2		
Religion				
Hindu	5	16		
Christian	5	4		
Muslim	-	-	1	0.4
Others	-	-		
Education				
Illiterate	4	18		
Primary school	2	2		
High school	2	2	2	0.09
Higher secondary	-	-		
Graduate and above	-	-		

Type of work				
Sedentary worker	5	10		
Moderate worker	-	15	1	5
Heavy worker	-	-		
Type of family				
Nuclear	5	19	1	1.4
Joint	5	1		
Area of residence				
Urban	5	15		
Rural	5	5	1	1
Semi urban	-	-		
Previous information regarding audio analgesia during the visit				
Yes	5	12	1	1.05
No	-	13		
If yes, source of information is from				
Media	5	5		
Neighbours	2	10		
Health professional	-	5	1	0.6
Family members	-	-		
None	-	3		

*p<0.05

The data of the above Table 12 reveal that there was no significant Association between ages, religion, educational qualification, type of family, area of residence, previous information regarding Audio analgesia with the level of coping in the experimental group after therapy. There was significant association between type of work in experimental group at ($\chi 2 = 5$, df =1) $p < 0.05$ level. The null hypothesis H_{O2} was rejected with regard to experimental group alone. The frequency of the women who were able to do 3R's was zero before therapy. Hence statistics could not be applied to find the association between selected demographic variables and the level of coping before therapy.

Table 13

Association between the Selected Obstetric Variables and Level of Labour Pain After Therapy in Control Group of Primiparturient Women.

Obstetric Variables	Level of Pain n=30		df	χ^2
	Moderate Pain	Severe Pain		
Gestational age (in weeks)				
37 to 39	5	10		
40 to 42	-	15	1	1.4
Gravida				
1	4	26		
2	-	-	1	0
3	-	-		
Number of antenatal visits till date				
No visit	-	-		
1 to 3 times	4	10	1	0
> 3 times	6	10		
Condition during antenatal period				
Anemia	-	-		
Pregnancy induced hypertension	-	-	1	0
Gestational diabetes mellitus	-	-		
Nil	8	22		
Pain management during first stage of labour				
Systemic analgesia	-	-		
Inhalational analgesia	-	-	1	0
Epidural analgesia	-	-		
Combined epidural analgesia	-	-		
Nil	10	20		

Type of delivery				
Normal vaginal delivery	6	22		
Other mode of delivery	-	2	1	1.07
Duration of first stage of labour				
<6 hours	-	-		
7 to 9 hours	-	-		
10 to 12 hours	4	10	1	0.08
>12 hours	6	10		
Fetal complication				
Prolapsed cord	-	-		
Respiratory syndrome	-	-		
Meconium aspiration syndrome	-	-	1	0
Asphyxia neonatrum	-	-		
None	8	22		

*p<0.05

Table 13 infers that there was no significant Association between gestational age in weeks, gravida, number of antenatal visits, condition during the antenatal period, pain management during the first stage of labour, type of delivery, duration of first stage of labour and fetal complication in the control group. Hence the null hypothesis Ho_3 was accepted. The association between selected Obstetric variables and level of labour pain before therapy in the control group cannot be calculated from the frequency of moderate pain was zero.

Table 14

Association Between the Selected Obstetric Variables and Level of Labour Pain After Therapy in Experimental Group of Primiparturient Women.

Obstetric Variables	Level of Pain n=30		df	χ^2
	Moderate Pain	Severe Pain		
Gestational age (in weeks)				
37 to 39	20	5		
40 to 42	5	5	1	1.2
Gravida				
1	25	5		
2	-	-		
3	-	-	1	0
Number of antenatal visits till date				
No visit	20	5		
1 to 3 times	5	-		
> 3 times	-	-		
Conditions during antenatal period			1	0
Anemia	-	-		
Pregnancy induced	-	-		
hypertension	-	-	1	0
Gestational diabetes mellitus	-	-		
Nil	25	5		
Pain management during first stage of labour				
Systemic analgesia	-	-		
Inhalational analgesia	-	-	1	0
Epidural analgesia	-	-		
Combined epidural analgesia	-	-		
Nil	24	6		

Type of delivery				
Normal vaginal delivery	22	6	1	0.9
Other mode of delivery	2	-		
Duration of first stage of labour				
<6 hours	-	-		
7 to 9 hours	-	-		
10 to 12 hours	15	5	1	0.6
>12 hours	10	-		
Fetal complication				
Prolapsed cord	-	-		
Respiratory syndrome	-	-		
Meconium aspiration syndrome	-	-	1	0
Asphyxia neonatrum	-	-		
None	26	4		

*p<0.05

Table 14 reveals that there was no significant Association between gestational age in weeks, gravida, number of antenatal visits, condition during the antenatal period, pain management during the first stage of labour, type of delivery, duration of first stage of labour and fetal complication in the experimental group. Hence the null hypothesis Ho_3 was accepted. The frequency of women having severe pain before therapy was zero and hence no statistics could be applied to find the association.

Table 15

The association between the Selected Obstetric Variables and Level of Coping after Therapy in Control Group of Primiparturient Women.

Obstetric Variables	Level of Coping n=30		df	χ^2
	Needs lot of help	Able to do 3 R's		
Gestational age (in weeks)				
37 to 39	18	2		
40 to 42	10	-	1	0.3
Gravida				
1	25	5		
2	-	-		
3	-	-	1	0
Number of antenatal visits till date				
No visit	-	-		
1 to 3 times	18	2		
> 3 times	8	2	1	1.3
Conditions during antenatal period				
Anemia	-	-		
Pregnancy induced	-	-		
hypertension	-	-	1	0
Gestational diabetes mellitus	-	-		
Nil	26	4		
Pain management during first stage of labour				
Systemic analgesia	-	-		
Inhalational analgesia	-	-		
Epidural analgesia	-	-		
Combined epidural analgesia	-	-	1	0
Nil	28	2		

Type of delivery				
Normal vaginal delivery	25	2		
Other mode of delivery	2	1		
Duration of first stage of labour			1	0
<6 hours	-	-		
7 to 9 hours	-	-		
10 to 12 hours	20	3		
>12 hours	5	2	1	0
Fetal complication				
Prolapsed cord	-	-		
Respiratory syndrome	-	-		
Meconium aspiration	-	-	1	0
Syndrome	-	-		
Asphyxia neonatrum	-	-		
None	25	5		

*p<0.05

It can be inferred from the Table 16 that there was no significant Association between gestational age in weeks, gravida, number of antenatal visits, condition during the antenatal period, pain management during the first stage of labour, type of delivery, duration of first stage of labour and fetal complication in the control group. Hence the null hypothesis Ho_3 was accepted. No association can be found between selected Obstetric variables and the level of coping before therapy in the control group as the frequency of women who were able to do 3 R's was zero.

Table 16

The association between the Selected Obstetric Variables and Level of Coping After Therapy in Experimental Group of Primiparturient Women.

Obstetric Variables	Level of Coping n=30		df	χ^2
	Needs lot of help	Able to do 3 R's		
Gestational age (in weeks)				
37 to 39	2	18		
40 to 42	-	10	1	0.6
Gravida				
1	5	25		
2	-	-		
3	-	-	1	0
Number of antenatal visits till date				
No visit	-	-		
1 to 3 times	2	18		
> 3 times	2	8	1	1.01
Conditions during antenatal period				
Anemia	-	-		
Pregnancy induced	-	-		
hypertension	-	-	1	0
Gestational diabetes mellitus	-	-		
Nil	4	26		
Pain management during first stage of labour				
Systemic analgesia	-	-		
Inhalational analgesia	-	-		
Epidural analgesia	-	-	1	0
Combined epidural analgesia	-	-		
Nil	2	28		

Type of delivery				
Normal vaginal delivery	2	25		
Other mode of delivery	1	2	1	0.6
Duration of first stage of labour				
<6 hours	-	-		
7 to 9 hours	-	-		
10 to 12 hours	3	20	1	0.06
>12 hours	2	5		
Fetal complication				
Prolapsed cord	-	-		
Respiratory syndrome	-	-		
Meconium aspiration	-	-		
syndrome			1	0
Asphyxia neonatrum	-	-		
None	5	25		

*p<0.05

The presented data from Table 15 reveals that there was no Association between gestational age in weeks, gravid, number of antenatal visits, condition during the antenatal period, Pain management during the first stage of labour, type of delivery, duration of first stage of labour and fetal complication in the experimental group. Hence the null hypothesis H_{03} was accepted. As the frequency of women who were able to do 3R's was zero before therapy, no statistics could be applied to find the association between selected obstetric variables and the level of coping.

Summary

This chapter dealt with the analysis and the interpretation of the data collected by the researcher. From the analysis it can be inferred that the level of labour pain was low and level of coping was high after therapy in the experimental group than the control group. Thus it shows that the Audio Analgesia was effective in reducing the labour pain perception during the first stage of labour among the primiparturient women.

CHAPTER V

DISCUSSION

Statement of the Problem

An experimental study to Assess the Effectiveness of Audio-Analgesia upon labour pain and coping in primiparturient women admitted at Devaraj Manikchand Maternity Hospital, Chennai.

Objectives of the Study

1. To assess the level of labour pain before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
2. To assess the effectiveness of audio-analgesia by comparing the level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women
3. To assess the level of satisfaction of primiparturient women after administration of Audio-Analgesia in the experimental group.
4. To find out the association between level of demographic variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
5. To find out the association between level of obstetrical variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

This study was carried out in the primiparturient women who were in the first stage of labour in Devarajmanikchand maternity hospital. The level of labour pain, coping level, feto maternal parameters were assessed for the control and experimental group of primiparturient women and Audio Analgesia was provided for the experimental group of primiparturient women every one hour and the pain level, coping level and fetal maternal parameters were assessed again in both the groups. The level of satisfaction upon Audio Analgesia was assessed among the experimental group of women after the labour.

The discussion was presented under the following heading:

- Demographic variables and obstetric variables of control and experimental group of primiparturient women.
- Mean and standard deviation of level of labour pain, coping level before and after the therapy among control and experimental group of primiparturient women.
- Assessment of level of satisfaction upon Audio Analgesia among the experimental group of primiparturient women.
- Association between selected demographic variables and level of labour pain, coping after therapy among control and experimental group of primiparturient women.
- Association between selected obstetric variables and level of labour pain, coping after therapy among control and experimental group of primiparturient women.

Demographic variables of primiparturient women

Majority of the women in the control and experimental group were between the age group of 21 – 25 years (76.7%, 76.7%) which shows most of them are aware about the right age of reproduction. It is also noted that 20% of the control group and 3.3% in the experimental group delivered over 30 years of age which emphasizes that there is less risk of developing complications during the antenatal period. This view was supported by Smith and Buy alas (2004) increasing maternal age reduces the success rate of pregnancy. The authors clearly showed that rate of pregnancy loss from 2.1% less than 30 years to 20% in women over 40 years.

The educational qualification of the women shows that most of them in the control group had only secondary education (53.4%) whereas a significant number of women in the experimental group was graduates (50%) and the majority of them in both the control and experimental group were moderate workers (80%, 70%). Tuntiseranee (2012) in his study in the year says that women who have no adequate education in school have improper dietary habits that affect the health of them leading to adverse pregnancy outcome and the review conducted by Shaw (2003) states that moderate workers have adverse outcome compared to sedentary workers. The researcher felt that doing graduation helps women in better coping and thus all women should be encouraged to do their graduations in addition to schooling.

Among the women of both the control and experimental group, most of them belong to nuclear family (43.3%, 66.7%) and joint family (56.7%, 33.3%). The majority of the women in the control group belong to urban area (96.7%) whereas the women in

the experimental group were almost in urban area and semi urban area 16.7%. A study conducted at the department of newborn care, Australia by Latif et al (2006) emphasizes that premature births are common among rural women with a higher risk of stillbirth than the urban women. Though the women are equally distributed in the rural and semi – urban areas they seek good medical advice and take adequate antenatal care.

Some of the women in the control and experimental group receive previous information about Audio Analgesia (60%, 66.7%) which shows that most of them were familiar with the various pain relief measures. Hence it is the duty of the nurse midwives to explain the women about various methods available for pain relief during labour.

Obstetric variables of the primiparturient women

The majority of the women in the control and experimental group were between 37 – 39 weeks of gestation (83.3%, 66.7%) during delivery and none of them were beyond 40 weeks. This proves that the risk of preterm labour and maternal complications was reduced with regular antenatal checkups and screening methods and the health care workers assists women in delivering the baby at the right time without leading to post term labour. This view was supported by Heimstad et al (2006) in the study conducted at the department of obstetrics and gynecology and National Centre for fetal medicine, Norway that maternal complications were lowest at 39 weeks of gestation compared to preterm and post term labour.

The majority of the women in control and experimental group who were primigravida (100%, 100%). More than three antenatal visits (76.37%, 83.3%) and

normal vaginal delivery (66.7%, 80%) by majority of the women in both the control and experimental group of primiparturient women.

Most of the women were aware about the importance of regular antenatal checkup thus reducing the abnormal deliveries. It is also noted that none of them had any type of pain management during labour in both the experimental and control group of primiparturient women. Khatib (2009) the study conducted that antenatal care is essential to reduce morbidity and mortality among newborn babies and pregnant women. Walker and Brein (1999) said that epidural analgesia or anesthesia and other pain management was associated with increased rates of instrumental and cesarean delivery. It is felt by the researcher that recent advances in the health care services improved the outcome of labour through increased antenatal visits.

The duration of the first stage of labour was between 10 – 12 hours (60%) in the control group in the majority of the women in the experimental group who had a duration of 10 -12 hours (70%) and the majority of the women in control and experimental group there was no conditions during antenatal period (100%, 100%) Alfman (2006) the study conducted that prolonged second stage of labour and risk of adverse outcomes maternal and perinatal outcomes. Also there was no fetal complication after delivery in control and experimental group (100%, 100%).

Mean and Standard Deviation of pain level before and after therapy in the control and experimental group of primiparturient women

All the women's in the control group had severe pain (100%) before therapy and majority of them also had severe pain (90%) after therapy. The mean and standard

deviation of the pain level was lower before therapy (M=5. 4, SD=0. 37) in the control group when compared with a pain level after therapy (M=5. 5, SD=0. 77). All the women's in the experimental group had severe pain (100%) before therapy but the majority had only moderate pain (90%) after therapy. The mean and standard deviation of the pain level before therapy (M=4. 74, SD=0. 44) was higher than the pain level after therapy (M=3. 4, SD=0. 34) in the experimental group of primiparturient women.

This shows that the Audio Analgesia was effective in reducing the level of labour pain perception. Many women need some type of method to deal with pain during childbirth. The management of labour pain is a primary responsibility of the nurse. Interventions to relieve pain are one of the essential aspects of nursing care that must be considered during a woman's labour. Because of its strong effect on pain management, Audio Analgesia can be used by the nurse midwife in assisting the women with labour pain.

A similar study was conducted by Bo and Zhang in the year of 2006 which showed that Audio Analgesia reduced the pain among the Parturient women's at $p<0.01$ level of significance and decreased the duration of labour when compared with the control group at $p<0.05$ level of confidence. Thus Audio Analgesia was found to be effective in managing the labour pain.

Mean and Standard Deviation of coping level before and after therapy in the control and experimental group of primiparturient women

The majority of the women's in the experimental group were able to do the 3 R's after therapy (86.7%) but all of them needed lots of help before therapy (100%).

The mean and standard deviation of coping level in the control group after therapy (M=3. 8, SD=0. 44) was lower when compared with before therapy (M=4. 6, SD=1. 29) whereas the mean and standard deviation of coping level after therapy (M=5. 2, SD=0. 38) was higher in the experimental group compared to before therapy (M=4. 3, SD=0. 94).

A study conducted by Abushaikha among Jordanian women's describes that they used different coping methods which included physiological, psychological, spiritual and cognitive methods to cope during labour. Thus it is the responsibility of every nurse midwife to understand the importance of using various coping methods during labour.

Feto maternal parameters of the primiparturient women

Among the feto maternal parameters of the primiparturient women's a significant difference was found in the duration and frequency of uterine contraction. The mean and standard deviation of frequency of uterine contraction were almost before control group, uterine contraction (M=3.9, SD=0.11; M=4, SD=0.14) and cervical dilatation (M=10, SD=5.3; M=10, SD=3.51) were increased in after therapy in comparison with before therapy.

This shows that Audio Analgesia increases the uterine contraction duration and reduces the uterine contraction frequency thus reducing the duration of labour for the Primiparturient women. A study conducted by Kashanian and Shahalito assess the effect of Audio Analgesia reduced both the labour pain and the duration of the first stage of labour with duration of 252.37 vs. 441.38 min at $P<0.0001$ level of significance.

Level of satisfaction of Audio Analgesia among primiparturient women

The majority of the women's were highly satisfied (60%) with Audio Analgesia and none of them had low satisfaction towards the therapy. This interprets that Audio Analgesia was highly effective in reducing the labour pain and improving the coping of the women. Though there are many techniques to reduce the labour pain, most of them are invasive or has adverse effects on the women or the baby. But Audio Analgesia is a type of non-invasive procedure that has a good effect on reducing the labour pain perception without affecting the women or the baby. Thus the midwives should understand the importance of using pain relief methods which are harmless and they should be encouraged in practicing such therapies.

An obstetrical and gynecological survey (2009) on comparing the satisfaction of Trans cutaneous electrical nerve stimulation and Audio Analgesia for labour pain shows that 53% of the participants in the Audio Analgesia group preferred Audio Analgesia for their next pregnancy whereas 66% of the participants in the control group had negative outcome towards the trans cutaneous electrical nerve stimulation for their next pregnancy proving that women are satisfied about the use of Audio Analgesia for labour pain.

Association between selected demographic variables and level of labour pain and coping after therapy in the control and experimental group of primiparturient women

In both the control and experimental group of primiparturient women no significant association was found between demographic variables and the level of labour

pain which proves that demographic variables has no influence over the pain perception. Hence some type of pain relief methods has to be provided for the women in reducing the pain.

There was a significant association between the type of work in experimental group of primiparturient women in coping ($\chi 2 = 5$, df =1) $p< 0.05$ level. This shows that demographic variables may not alter the coping level of the women and hence it is the responsibility of the nurse midwife to help the women in coping with the labour pain.

No association could be found between demographic variables and level of labour pain before therapy as all the women experienced severe pain respectively in both the control and experimental group.

Association between selected obstetric variables and level of labour pain and coping after therapy in the control and experimental group of primiparturient women

No significant association was found between the obstetric variables and the level of labour pain in both the control and experimental group of primiparturient women and similarly no association between the obstetric variables and level of coping was found in both the groups which emphasizes that obstetric variables has no influence over the pain perception and coping level of the women and necessitates provision of external agent in reducing the labour pain and improving the coping level.

As everybody in the control and experimental group experienced only severe pain and needed lots of help before therapy no statistics could be applied to find the association selected obstetric variables and the level of labour pain and coping

respectively. This was supported by a study conducted by Kanga Durga (2012) on assessing the effect of Scalp acupressure on labour pain where was no association between the age, education, area of residence with that of the labour pain.

Summary

This chapter has dealt about the discussion of various aspects of the study findings. This emphasized on the demographic variables and obstetric variables of the primiparturient women. It has also dealt about the mean and standard deviation of level of labour pain, coping and fetal maternal parameters before and after therapy in the control and experimental group, association between selected demographic variables with level of labour pain and coping after therapy and the association between selected obstetric variables with the level of labour pain and coping after therapy in both the control and experimental group of primiparturient women with supporting studies.

CHAPTER VI

SUMMARY, CONCLUSION, IMPLICATIONS, RECOMMENDATIONS AND LIMITATIONS

Summary

This study was conducted by the researcher to find the Effectiveness of Audio Analgesia upon labour pain among the primiparturient women during the first stage of labour.

Objectives of the Study

1. To assess the level of labour pain before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
2. To assess the effectiveness of Audio-Analgesia by comparing the level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women
3. To assess the level of satisfaction of women after administration of Audio-Analgesia in the experimental group of primiparturient women.
4. To find out the association between level of demographic variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.
5. To find out the association between level of obstetrical variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

Null Hypotheses

Ho_1 There will be no association between level of labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

Ho_2 There will be no association between the level of demographic variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

Ho_3 There will be no association between level of obstetrical variables and labour pain and coping before and after administration of Audio-Analgesia in control and experimental group of primiparturient women.

The major findings of the study

Demographic variables of the primiparturient women

Majority of the women were between the age group of 21 – 25 years (76.7%, 76.7%), were Hindu (80%, 70%) with secondary education (80%, 70%), were homemakers (86.7%, 76.7%), resided in urban areas (96.7%, 83.3%) , were moderate workers (86.7%, 90%) and most of the women belonged to nuclear family (43.3%, 66.7%) and had previous information about Audio Analgesia (60%, 66.6%) in control and experimental group respectively.

Obstetric variables of the primiparturient women

100% of women were primi gravid with no complication during the antenatal period, none of them received any type of pain management during labour and there was

no fetal complication during delivery. The majorities of the women were between the gestational ages of 37 – 39 weeks (83.3%, 66.7%), had more than five antenatal visits (76.7%, 83.3%) and underwent normal vaginal delivery (66.7%, 80%) in control and experimental group respectively. Most of the women had a duration of the first stage of labour between 10 – 12 hours (60%, 70%) in control and experimental group respectively.

Level of labour pain in the primiparturient women

The majority of the primiparturient women in the control group had severe pain (100%, 70%) before and after therapy respectively whereas the experimental group of primiparturient women had moderate pain (83.3%) after therapy when compared with before therapy where all the women had severe pain (100%). Mean pain level in the control group was high after therapy (M=5. 5, SD=0. 77) compared to before therapy (M=5. 4, S. D=0. 37) whereas the mean value of pain was low (M=3. 4, SD=0. 34) after therapy in the experimental group when compared with before therapy (M=4. 74, SD=0. 44). The level of confidence was 99.9% and it shows the effectiveness of Audio analgesia upon labour pain. Hence the null hypothesis H_{01} was rejected.

Level of coping in the primiparturient women

Most of the parturient women in the control group needed help before therapy (70%) and (100%) of them after therapy whereas in the experimental group majority of them were able to do 3r's- Rhythm, Ritual and relaxation (83.3%) before therapy when compared with after therapy where all the parturient women needed lots of help (100%). The mean coping level was low after therapy (M=3.8, SD=0.44) in comparison to

before therapy (M=4.6, SD=1.29) in the control group whereas the mean coping level was found to be high after therapy (M=5.2, SD=0.38) in comparison with before therapy (M=4.3, SD=0.94) of the experimental group. Thus the effectiveness of Audio analgesia was statistically proved at the 99.9% level of confidence. Hence the null hypothesis H_{01} was rejected.

Feto maternal parameters of the primiparturient women

In the control group, uterine contraction (M=3.9, SD=0.11; M=4, SD=0.14) and cervical dilatation (M=10, SD=5.3; M=10, SD=3.51) were increased after therapy in comparison with before therapy at 95% level of confidence. Whereas the systolic blood pressure before and after therapy were (M=120, SD= 3.1;M=118,SD=2.24) and (M=119, SD=2.24;M=117.5, SD=4.14) and diastolic blood pressure before and after therapy were (M=76.2,SD=3.2;M=70.1,SD=3.6) and (M=76.27,SD=3.23;M=70, SD=3.38) in the control and experimental group of primiparturient women respectively which shows that Audio analgesia was effective in reducing the frequency of uterine contraction and the difference in the experimental group was statistically proved at 99.9% level of confidence.

Level of satisfaction upon Audio analgesia

Most of the participants in the experimental group were highly satisfied (60%) with Audio analgesia during the first stage of labour and none of them reported dissatisfaction towards the intervention.

Association between selected demographic variables and level of labour pain and coping in primiparturient women

It could be revealed that there is no significant Association between age, religion, educational qualification, type of family, area of residence, previous information regarding Audio analgesia with the level of labour pain after therapy in the control group of primiparturient women. There was significant association between type of work in experimental group at ($\chi 2 = 5$, df =1) $p< 0.05$ level. The null hypothesis Ho_2 was rejected with regard to experimental group alone. No statistics could be applied to find out the association between selected demographic variables and the level of labour pain before therapy in the control group since the frequency of moderate pain was zero.

Association between selected Obstetric variables and level of labour pain and coping in primiparturient women

There is no significant Association between gestational age in weeks, gravida, number of antenatal visits, condition during the antenatal period, pain management during the first stage of labour, type of delivery, duration of first stage of labour and fetal complication in the control group. Hence the null hypothesis Ho3 was accepted. The association between selected obstetrical variables and level of labour pain before therapy in the control group cannot be calculated from the frequency of moderate pain was zero.

Conclusion

This study shows that Audio Analgesia was effective in reducing the labour pain perception and improving the coping level. The experimental group of women who

received Audio analgesia had decreased pain perception and was highly satisfied with the therapy. Hence the midwives could be encouraged to use this as a non-pharmocological pain relief method during labour.

Implications

Nursing Practice

The Parturient women of the experimental group felt less pain and improved coping with the use of Audio analgesia during the first stage of labour than the control group proving it to be effective to use. The intensity of labour pain, the length of time labour lasts and women's response to the pain vary widely. The environment in which the women give birth and the support they receive from their caregivers and companions will also affect their reaction to pain and their ability to cope. Many women opt to use some form of pain relieving method to help them cope during labour. Hence it becomes a necessity for the midwives have adequate knowledge and skill about various non-pharmacological methods. Though there is the availability of various non-pharmacological methods, Audio analgesia is noninvasive, safe and effective. Thus nurses should use Audio analgesia as noninvasive, safe and effective treatment modalities in their practices.

Nursing Education

The nursing profession has a long history of viewing and caring for individuals in a holistic manner. A national conference conducted by the National Institutes of Health of Alternative Medicine and the Uniformed Services University of Health

Sciences concluded that nursing and medical education should include information about complementary and alternative therapies. Nurse educators should consider the inclusion of complementary and alternative therapies in nursing curriculum with increasing frequency and motivation by the major part of the public for the use of these therapies. Inherent in the nurse's role is the ability to assess, intervene and evaluate preventive, supportive, and restorative functions of a patient's physical, emotional, mental and spiritual domains. This should be emphasized to the nursing students through educating them about the various therapies that helps the patients in providing care to meet the above aspects.

Nursing Administration

With the advent of various technologies in the field of nursing, nurses are expected to be skillful in various aspects of providing care for which student nurses have to be trained in it through their education. Thus it is the responsibility of the nurse administrators to include the concept of alternative and complementary therapies in the nursing curricula. The nursing staffs and the nursing students should be encouraged by the nurse administrators to learn various nursing modalities in caring patients and could conduct certifying courses which would help them to practice alternative and complementary therapies.

Nursing Research

The competence of a registered nurse to perform the skills of complementary and alternative therapies begins with nursing education and ends with nursing practice which requires an evidence to give assurance that the knowledge and practice gained by

the nurse are safe and provides comfort for the patients. This major research has to be promoted and conducted by the nurse researchers to prove the effectiveness of alternative and complementary therapies in nursing profession.

Recommendations

- The same study can be conducted with larger number of samples.
- A comparison can be made between primi and multi Gravida.
- A comparison can be made with different stages of labour.
- The same study can be conducted at different settings.
- A comparison can be made between different types of alternative and complementary therapies.

Limitations

- The study findings cannot be generalized due to small sample size.
- Systematic random sampling was not possible due to practical difficulties.
- Quasi experimental research could not be conducted as there are chances of contamination effects.

REFERENCES

Anderson, F.W., and Johnson, C.T. (2005). Complementary and alternative medicine in obstetrics. **An International Journal of Obstetrics and Gynecology**, 116-24.

Brown,T. (2001).Women evaluation of interpretation of nonpharmological pain relief methods and during labour. **Journal of Perinatology**, 1-8.

Capeda, M.S. (2006). The music for pain relief. **Journal of obstetrics and gynecological nursing**, 3rd edition, 124-126.

Dutta, D. C. (2005). Pharmacodynamics. **Textbook of Obstetrics ,** 6thedition, Calcutta: New Central Book Agency. 130 – 134, 445 – 447.

Fraser, M., & Copper, A. (2004). **Textbook for midwives**, 14th edition China: Churchill Livingstone.

Gross, M. M. et al. (2009). Onset of Labour: women experiences and Midwives assessment in relation to first stage of duration. **Journal of archives of gynecology and obstetrics,** 280 (6), 899-905.

Heimstad,S. et al.(2006). Outcome of pregnancy beyond 37 weeks of gestation. **Journal of Obstetrics and Gynaecology of nursing**, 108(3), 500-508.

Hutton, E.K. (2009). Anesthesia progress. **Audio analgesia revisited,** 8-14.

Jacob, A. (2004). **A Comprehensive Textbook of Midwifery,** 1st edition, New Delhi: Jaypee Brothers. 498 – 500, 359 – 361.

Kannan, R. N., & Datta, S. (2001) Maternal satisfaction and pain control women electing natural child birth. **Journal of Regional Anesthesia and Pain Medicine**, 26 (5), 468-72.

Keirse, M.(2000). Pain relief method. **A Guide to effective care in pregnancy and childbirth**, 3rd edition, Oxford university press, 55-57.

Kim, S. (2010). **Alternative medicine and health care India**, Retrieved November 2011 from http://www.articles base.com/alternative-medicine-and-health-care-in-India-1788507. html.

Lawrence, M.F., & Percival, P. (1995). Comparison of expected and experienced labour pain of primiparous women. **Journal of Royal college of Nursing** , 32 – 38.

Liv ,Y.H. (2010) . Effects of music therapy on labour pain and anxiety in Taiwanese first time women. **Journal of clinical nursing** , 1065-72.

Lliadon, M. (2009. Labour pain and pharmacological pain relief. **Journal of obstetrics and gynecology nursing,** Health Science, 1-5.

Perry, L. (2004). **Maternity And Women's Health Care,** 8th edition Missouri: Mosby Publishers. 480 – 483, 523 – 526.

Lowe, N. (2002). The nature of labour pain, **American journal of obstetrics and gynecology**, 16-24.

Mahajan, B.K. (2010). **Methods In Biostatistics,** 7th edition, New Delhi: Jaypee Brothers Medical Publishers. 120 – 136.

Nabb, M.T. (2006). Expectant parents complementary therapies consultancy. **Complementary and alternative medicine**, 12 (3), 222-31.

McInnes, R.J. et al. (2004). Diamorphine for pain relief in labour: a Randomized controlled trial comparing intramuscular injection and patient-controlled analgesia. **An International Journal of Obstetrics and Gynecology**, 111 (10), 1081-9.

Milwaukee, (1990). Improved obstetric outcomes using hypnotic analgesia and skill mastery combined with childbirth education. **Journal of Consulting and Clinical Psychology**, 58 (5), 525-30

Moore, W. (2002). Pain relief methods. **An international journal of obstetrics and gynecology**, 456-457.

Murray, E.S., and McKinney,S.S.(2006). **Foundation of maternal - newborn and women's health nursing,** 5th edition , Missouri: Saunders Elsevier.

Myles, (2004). **Textbook For Midwives,** 14thedition , China: Churchill Livingstone. 436 – 438.

Lawrence, M.F., and Percival, P. (1995). Comparison of expected and experience labour pain of primiparous women. **Journal of royal college of nursing**, 2 (4), 32-38.

Leonard, D., & Perry, S.E. (2004). **Maternity and women's health care**, 8 deductions, Missouri: Mosby publishers.

Prabhakara, G.N. (2006). **Biostatistics,** 1st edition, New Delhi: Jaypee Brothers Medical Publishers. 162 – 170

Petrou,S .et al. (2003). Antenatal visits and adverse perinatal outcomes: results from a British population-based study. **European Journal of Obstetrics & Gynecology and Reproductive Biology**, 106 (1), 40-9.

Phumdoung, (2003). Music reduces sensation and distress of labour pain. **Pain management nursing**, 54-61.

Pilliteri, A. (2010). **Maternal and Child Health Nursing,** 6th edition, Philadelphia: Lippincott Williams and Wilkins. 359 – 363.

Polite, D.F., Beck, C.T. (2010). **Nursing Research,** 8th edition, Philadelphia: Lippincott Williams And Wilkins. 260 – 270, 452 – 457, 595 – 600.

Olayemi, O.et al .(2006). The influence of westernisation on pain perception during labour among Parturients at the university college hospital Ibadan. **Journal of Obstetrics and Gynaecology**, 26 (4), 329-31.

Roberts, C.L. (2006). Pain in labour and childbirth. **Center for perinatal health services research** , 30-31.

Raisler, J., and Waters, B.L. (2003). Ice Massage for the Reduction of Labour Pain**. Journal of Midwifery & Women's Health,** 48, 5.

Simkin, P.T. (2004). Update on nonpharmological approaches to relieve labour pain and prevent suffering. **Journal of Obstetrics and Gynecology Nursing**, 21-25.

Simkin, P.T. (2004). Non pharmacological methods. **Journal of midwifery health** , Elsevier Science Inc 49 (6), 489-504.

Smith, C.A. (2006). Alternative medicine for pain management of labour**. Complementary and alternative medicine,** published by Cochrane collabouration, 1-30.

Smith, C.A. (2006). **Foundations of Maternal - Newborn nursing,** Missouri: Saunders Elsevier.

Slone, E. et al. (2005). **Maternal-child nursing**, 3rd edition, Missouri: Saunders Elsevier.

Turner, M. (2007). **Music for pain relief**. Obstetrics and Gynaecology department, saint Vincent de Paul hospital, 52-55.

Weisbrod, L. (2000). **Audio analgesia revisited**, University of California at Los Angeles school of engineering, 1-7.

APPENDIX -I

LETTER SEEKING PERMISSION FROM THE SETTING

Apollo College of Nursing

(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

CO/0260/12 ***11.06.12***

To

The Director

Devaraj Manickchand Maternity Hospital

No. 10, Vinayaka Mudali Street

Sowkarpet,

Chennai - 600079

Respected Sir / Madam,

Sub.: *To request permission for research study – Reg.*

Greetings! *As part of the curriculum requirement our 2nd year M. Sc. (N) student* ***Ms. SATHYA.R*** *has selected the following title for her research study.*

"An experimental study to assess the effectiveness of Audio analgesia upon labour pain among parturient mother at selected hospital, Chennai."

So I kindly request your good selves to permit her to conduct study in your esteemed institution.

Thanking You,

Dr. LATHA VENKATESAN
PRINCIPAL

IS/ISO 9001:2000

Vanagaram to Ambattur Main Road, Ayanambakkam, Chennai - 600 095.
Ph. : 044 - 2653 4387 Tele fax : 044 - 2653 4923 / 044- 2653 4386

APPENDIX II

LETTER FOR PERMITTING TO CONDUCT STUDY

Phone:25291312/25298701

DEVRAJ MANICKCHAND MATERNITY HOSPITAL

A Unit of Shree Jain Medical Relief Society (Reg.No: 37/1951)
No.10.Vinayaka Mudali Street, Sowcarpet,Chennai-600 079
E-mail.jainmedical1950@hotmail.com

To

The principal
Apollo College Of Nursing
Vanagaram to Ambattur Main Road
Ayanambakkam,
Chennai-600095

Madam,

Ref : Your Letter No.CO/0268/12 Dated : 11.6.2012

The Secretary of the Devraj Manickchand Materntiy Hospital is please to permit Ms.Sathya.R M.Sc II[nd] Year student of your college to conduct research study in this hospital without determent to the normal function of the department. She has completed her project work from 12.6.2012 to 21.7.2012

She conducted her project work in an excellent manner with good dedications and punctual timing and in present way.

We offer our best wished to her for very successful and fruitful career

Thanking you,

Your's Truly

For Devraj Manickchand Materntiy Hospital

Secretary

DEVRAJ MANICKCHAND MATERNITY HOSPITAL
No. 10, Vinayaga Mudali St, SOWCARPET, CHENNAI-79.

APPENDIX -III

ETHICAL COMMITTEE CLEARANCE LETTER

Ethics Committee

Apollo HOSPITALS
TOUCHING LIVES

30th August 2012

To,

Ms. R.Sathya
2nd Year M.Sc (Nursing),
Department of Obstetrics and Gynaecological Nursing,
Apollo College of Nursing,
Chennai.

Ref: An Experimental study to assess the effectiveness of Audio-Analgesia upon labour pain and coping in primi parturient women admitted at selected hospital, Chennai.

Sub: Approval of the above referenced project and its related documents.

Dear Ms. R.Sathya,

Ethics Committee-Apollo Hospitals has received the following document submitted by you related to the conduct of the above-referenced study.

- Project proposal.
- Participant consent form.

The Ethics Committee-Apollo Hospitals reviewed and discussed the study proposal documents submitted by you related to the conduct of the above referenced study at its meeting held on 29th August 2012.

The following Ethics Committee Members were present at the meeting held on 29th August 2012.

Name	Profession	Position in the committee
Mr. S. S. Narayanan	Ethicist	Chairman
Dr. Rema Menon	Clinician	Member Secretary
Dr. Radha Rajagopalan	Clinician	EC-Member
Dr. Krishnakumar	Clinician	EC-Member
Dr. Vijaya Kumar	Clinician	EC-Member
Dr. Clive Fernandes	Consultant Clinical Pharmacologist	Basic Medical Scientist
Dr. Nalini Roa	Social Worker	EC-Member
Ms. N. Suseela	Retired English Teacher	Layperson

Apollo Hospitals Enterprise Limited
21, Greams Lane, Off Greams Road, Chennai - 600 006
Tel : 91 - 44 - 2829 3333 Extn : 6008, 91 - 44 - 2829 5465 Extn : 6639 Fax : 91 - 44 - 2829 4449
E - Mail : ecapollochennai@gmail.com

Ethics Committee

Apollo HOSPITALS
TOUCHING LIVES

30th August 2012

To,

Ms. R.Sathya
2nd Year M.Sc (Nursing),
Department of Obstetrics and Gynaecological Nursing,
Apollo College of Nursing,
Chennai.

Ref: An Experimental study to assess the effectiveness of Audio-Analgesia upon labour pain and coping in primi parturient women admitted at selected hospital, Chennai.

Sub: Approval of the above referenced project and its related documents.

Dear Ms. R.Sathya,

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Dr. Krishnakumar	Clinician	EC-Member
Dr. Vijaya Kumar	Clinician	EC-Member
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Dr. Nalini Roa	Social Worker	EC-Member
Ms. N. Suseela	Retired English Teacher	Layperson

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21, Greams Lane, Off Greams Road, Chennai - 600 006
Tel : 91 - 44 - 2829 3333 Extn : 6008, 91 - 44 - 2829 5465 Extn : 6639 Fax : 91 - 44 - 2829 4449
E - Mail : ecapollochennai@gmail.com

APPENDIX IV

PLAGIARISM ORIGINALITY REPORT

Plagiarism Detector - Originality Report

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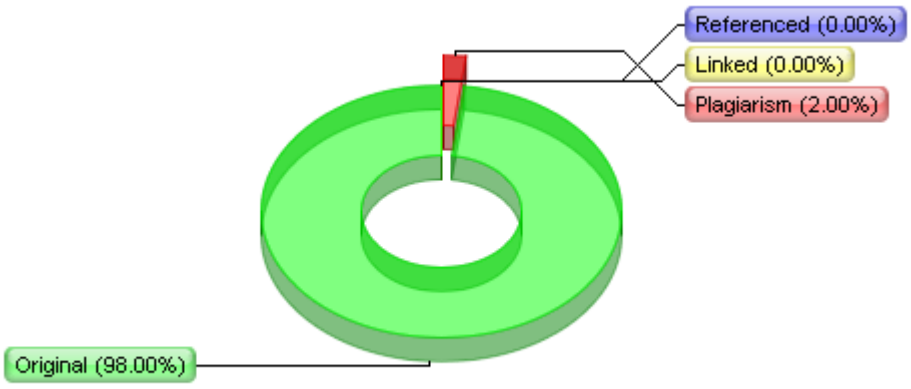


<=""">

Referenced 0% / Linked 0%

Original - 98% / 2% - Plagiarism

APPENDIX V

PERMISSION FOR USING PAIN INTENSITY SCALE AND PAIN COPING SCALE

Gmail by Google

sathya sathya <saravanasathya25@gmail.com>

(no subject)

sathya sathya <saravanasathya25@gmail.com>
To: kmh@pregnancytoparenthood.org

Mon, Jun 6, 2012 at 5:57 PM

Subject: Requesting permission

Respected Madam,

I am Ms. Sathya R, a postgraduate nursing student at Apollo College of Nursing. I would like to do my research in Obstetrics under the tiltle "An experimental study to assess the effectiveness of Audio Analgesia upon labour pain among primiparturient women" for which I am in need of using a pain intensity and coping scale. May I get permission to use the above said scale which is published in science and sensitivity website? This would help me to proceed with my study and I would be highly greatful to you.

Thanking You,

Your's Sincierly,
Sathya. R

APPENDIX VI

CONTENT VALIDITY CERTIFICATE

I hereby certify that I have validated the research tool of Ms. Sathya. R, M.Sc. (Nursing) student who is undertaking research study on **"Effectiveness of Audio analgesia upon labor pain and coping among primipartient women, Chennai"**

Signature of Expert

Name and Designation

APPENDIX VII

REQUEST FOR CONTENT VALIDITY

LETTER REQUESTING OPINIONS AND SUGGESTIONS OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF RESEARCH

From
Ms. Sathya. R
M.Sc., (Nursing) II year,
Apollo College of Nursing,
Chennai-95.

To

Through Proper Channel
Dr. LathaVenkatesan,
Principal,
Apollo College of Nursing.

Sub: Request for opinions and suggestions of expert for establishing content validity of Respected tool.

Respected Madam,

Greetings! As a part of the Curriculum Requirement the following research title is selected for the study.
"Effectiveness of Audio analgesia upon labor pain and coping among primipartient women" I will be highly privileged to have your valuable suggestions with regard to the establishment of content validity of Research tool. So I request you to validate my Research tool and give suggestions about the tool.

Thanking you,

Yours Sincerely,

(Ms. Sathya. R)

Place:

Date:

APPENDIX –VIII

LIST OF EXPERTS VALIDATED THE CONTENT

1. **Dr.LathaVenkatesan, M.Sc (N)., M.Phil (N)., Ph.D (N).,**
   Principal,
   Apollo College of Nursing,
   Chennai- 600 095

2. **Prof. Lizy Sonia., M.Sc (N)., Ph.D (N)**
   Vice Principal,
   Apollo College of Nursing,
   Chennai-600 095

3. **Prof. K. Vijayalakshmi, M.Sc (N)., Ph.D (N)**

   Professor,
   Apollo College of Nursing,
   Chennai- 600 095

4. **Mrs. NesaSathyaSatchi, M.Sc (N),**
   Professor,
   Apollo College of Nursing,
   Chennai- 600 095
   .
5. **Ms. Pappy Yuvarani, M.Sc (N).,**
   Reader,
   Apollo college of Nursing,
   Chennai- 600 095

6. **Ms .Kavitha, M.Sc (N).,**
   Lecturer,
   Apollo College of Nursing,
   Chennai- 600 095

7. **Ms. Saraswathi, M.Sc (N).,**
   Lecturer,
   Apollo College of Nursing,
   Chennai- 600 095

APPENDIX –IX

LETTER SEEKING CONSENT FROM PARTICIPANTS

Dear participant,

I am a M.Sc., Nursing student of Apollo College of Nursing, Chennai. As part of my study, a research on "Effectiveness of Audio Analgesia upon labor pain and coping in parturient women". The findings of the study will be helpful in reducing the pain in parturient women during labor.

I hereby seek your consent and co-operation to participate in the study. Please be frank and honest in your responses. The information collected will be kept confidential and anonymity will be maintained.

Signature of the researcher

I ……. Hereby consent to participate and undergo the study

Signature of the participant

ஆராய்ச்சியில் பங்கு பெறுபவருக்கான ஒப்புதல் படிவம்

அன்பார்ந்த தாய்மாரே,

நான் அப்போலோ செவிலியர் கல்லூரியில் முதுகலை செவிலியிர் பயிற்சி பெறும் மாணவி, என்னுடைய பயிற்ச்சியின் ஒரு பகுதியாக ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) மூலம் பிரசவத்தின் போது ஏற்படும் வலியின் அளவை மாற்றும் திறனை மதிப்பீடு செய்யும் ஆய்வை செய்கிறேன்.

இதனால் இந்த ஆராய்ச்சியில் நீங்கள் பங்கு பெற உங்களுடைய ஒப்புதல் மற்றும் ஒத்துழைப்பை வேண்டுகிறேன். தயவு செய்து உங்களுடைய பதில்கள் அனைத்தும் வெளிப்படையாகவும் மற்றும் உண்மையானதாகவும் இருக்க வேண்டும் உங்களுடைய பெயர் எங்கும் வெளியிடப்படமாட்டாது.

ஆராய்ச்சியாளரின் கையொப்பம்

..... என்ற நான் இந்த ஆராய்ச்சியில் பங்கு பெற ஒப்புதல் அளிக்கிறேன்.

பங்குப் பெறுவோரின் கையொப்பம்

APPENDIX - X

CERTIFICATE FOR AUDIO ANALGESIA TRAINING

Chennai School of Music

01/August/2012
Chennai

This is to permit the candidate Ms.Sathya.R, doing M.Sc., Nursing, as part fulfilment of her studies in the second year project Work, to use the Compact disc of "Natural Sound of White Sea" , for the study, " To Assess the effect of given Audio Analgesia upon labour pain among the Pregnant women"

The audio given in the Compact Disc must be utilized for the research purpose only

Regards.
for Chennai School Of Music

R. Narain 01/08/12

Director (Academics)

Academic Partner :

UNIVERSITY OF WEST LONDON
FORMERLY THAMES VALLEY UNIVERSITY

#38, Murugan koil Street, Vivekanandha Nagar, Kolathur, Chennai 600099. 9600049511, 044 26511015.

APPENDIX - XI

CERTIFICATE FOR ENGLISH EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the tool for demographic variable proforma, numerical pain intensity scale, pain coping scale, level of satisfaction on Audio Analgesia, translated by Ms. SATHYA.R II year M.Sc (N)., student Apollo College of Nursing for her dissertation "An experimental study to assess the effectiveness of Audio Analgesia upon labour pain and coping among parturient women at a selected Hospital, Chennai" was edited for English language appropriateness.

B. Kumaran

Signature

B. KUMARAN, M.A., M. Phil., B.Ed.,
Lecturer (SS) in English
Guru Nanak College
Velachery, Chennai-42.

APPENDIX -XII

CERTIFICATE FOR TAMIL EDITING

TO WHOM SOEVER IT MAY CONCERN

This is to certify that the tool for demographic variable proforma, numerical pain intensity scale, pain coping scale, level of satisfaction on Audio Analgesia, translated by Ms. SATHYA.R II year M.Sc (N)., student Apollo College of Nursing for her dissertation "An experimental study to assess the effectiveness of Audio Analgesia upon labour pain and coping among parturient women at a selected Hospital, Chennai" was edited for Tamil language appropriateness.

Signature

Dr. M. MURTHI
Asst. Professor & Head
Department of Tamil
Guru Nanak College,
Chennai-600 042.

APPENDIX -XIII

DEMOGRAPHIC VARIABLE PROFORMA FOR PRIMIPARTURIENT WOMEN

Purpose

This proforma will be used by the researcher to collect information on demographic variable proforma such as age, religion, educational status, type of work, type of family, area of residence, previous information regarding Audio Analgesia during visit.

Instruction

The investigator will collect data by interviewing the mother and to fill the details.

Sample no ☐

IP no ☐

1. Age in years

1.1. <20 ☐

1.2. 21 to 25 ☐

1.3 . 26 to 30 ☐

1.4 ≥31 ☐

2. Religion

2.1. Hindu ☐

2.2. .Christian ☐

2.3. .Muslim ☐

2.4. Others ☐

3. Education

3.1. Illiterate ☐

3.2. Primary school ☐

3.3. High school ☐

3.4. Higher secondary ☐

3.5. Graduate& above ☐

4. Type of work

4.1. Sedentary worker ☐

4.2. Moderate worker ☐

4.3. Heavy worker ☐

5. Type of family

5.1 Nuclear ☐

5.2 Joint ☐

6. Area of residence

6.1. Urban ☐

6.2. Rural ☐

6.3. Semi urban ☐

7. Previous information received regarding Audio Analgesia during the visit

7.1. Yes ☐

7.2. No ☐

8. If yes, source of information is from

8.1. Media ☐

8.2. Neighbors ☐

8.3. Health professionals ☐

8.4. Family members ☐

பொது விவர ஆய்வறிக்கை

நோக்கம்

ஆய்வாளரால் பயன்ப்படுத்தப்படும் இவ்வறிக்கையானது தங்களின் வயது, ஜாதி, கல்வித்தகுதி, தொழில், குடும்பத்தன்மை, இருப்பிடம் மற்றும் ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) குறித்த முன்அறிவு போன்ற தகவல்களைச் சேகரிக்கப் பயன்படுகிறது.

குறிப்பு

கீழ்வரும் தகவல்கள் ஆய்வாளரால் நேர்முக கலந்துரையாடல் மூலம் சேகரிக்கப்படும்.

1. ஆண்டின் படி வயது

1.1 20-க்கு குறைவாக ☐

1.2 21 முதல் 25 வயது வரை ☐

1.3 26 முதல் 30 வயது வரை ☐

1.4 31 வயதுக்கு மேல் ☐

2. மதம்

2.1 இந்து ☐

2.2 கிறிஸ்துவர் ☐

2.3 முஸ்லீம் ☐

2.4 மற்றவை ☐

3. கல்வித்தகுதி

3.1 கல்வியற்றவர் ☐

3.2 தொடக்கக் கல்வி ☐

3.3 உயர்க்கல்வி ☐

3.4 உயர்நிலைக்கல்வி ☐

3.5 பட்டப்படிப்புக்கு மேல் ☐

4. வேலையின் தன்மை

4.1 குறைந்தபட்ச வேலை ☐

4.2 மிதமான வேலை ☐

4.3 கடின வேலை ☐

5. குடும்பத்தன்மை

5.1 சிறுகுடும்பம் ☐

5.2 கூட்டுக்குடும்பம் ☐

6. வசிப்பிடம்

6.1 கிராமப்பகுதி ☐

6.2 நகர்புறப் பகுதி ☐

6.3 நகரப் பகுதி ☐

7. ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) மருத்துவம் குறித்து முன்விவரம் உண்டா?

7.1 ஆம் ☐

7.2 இல்லை ☐

8. ஆம் எனில், தகவல் அறிந்த ஊடகம்

8.1 தொலைத்தொடர்பு சாதனங்கள் ☐

8.2 நண்பர்கள் ☐

8.3 மருத்துவ அனுபவர்கள் ☐

8.4 குடும்ப உறுப்பினர்கள் ☐

APPENDIX -XIV

OBSTETRIC VARIABLE PROFORMA FOR PRIMIPARTURIENT WOMEN

Purpose

The proforma will be used by the researcher to collect information on obstetrical variable such as gestational age in weeks, gravida, number of antenatal visits, conditions during antenatal period, pain management during first stage of labour, type of delivery, duration of first stage of labour.

Instruction

The researcher will be referring the hospital records of mother to fill the details.

1. Gestational age (in weeks)

1.1. 37 to 39 ☐

1.2. 40 to 42 ☐

2. Gravida

2.1. 1 ☐

2.2. 2 ☐

2.3. >3 ☐

3. Number of antenatal visits till date

3.1. No visit ☐

3.2. 1 to 3 times ☐

3.3. >3 times ☐

4. Conditions during antenatal period

4.1. Anemia ☐

4.2. Pregnancy induced hypertension ☐

4.3. Gestational diabetes mellitus ☐

4.4. None ☐

5. Pain management during first stage of labor

5.1. Systemic analgesia ☐

5.2. Inhalational analgesia ☐

5.3. Epidural analgesia ☐

5.4. Combined epidural analgesia ☐

5.5. None ☐

6. Type of delivery

6.1. Normal vaginal delivery ☐

6.2. Other mode of delivery ☐

7. Duration of first stage of labor

7.1. 6 hours ☐

7.2. 7 to 9 hours ☐

7.3. 10 to 12 hours ☐

7.4. 12 hours ☐

8. Fetal complications

8.1. Prolapsed cord ☐

8.2. Respiratory syndrome ☐

8.3. Meconium aspiration syndrome ☐

8.4. Asphyxia neonatrum ☐

8.5 None ☐

மகப்பேறு விவரங்களை அறியும் படிவம்

நோக்கம்

இந்த படிவம் கர்பங்களின் எண்ணிக்கை, பிரசவங்களின் எண்ணிக்கை குழந்தைகளின் எண்ணிக்கை, பிறப்பிற்கு முந்திய வருகை எண்ணிக்கை, பிறப்பிற்கு முந்திய நிலைமைகள், பிரசவத்தின் முதல் நிலை போது வலி மேலாண்மை, பிரசவத்தின் வகை, பிரசவத்தின் முதல் நிலைகாலம், சிசு சிக்கல்.

குறிப்பு

கீழ்வரும் தகவல்கள் ஆய்வாளரால் நேர்முக கலந்துரையாடல் மூலமும், மருத்துவமனை குறிப்பேடுகளின் வாயிலாகவும் சேகரிக்கப்படும்.

1. கர்பங்களின் எண்ணிக்கை வாரத்தில்

1.1 37 – 39 ☐

1.2 40 – 42 ☐

2. பிரசவங்களின் எண்ணிக்கை

2.1 1 ☐

2.2 2 ☐

2.3 3 ☐

3. தேதி வரைப் பிறப்பிற்கு முந்திய வருகை எண்ணிக்கை

3.1 இல்லை விஜயம் ☐

3.2 1 முதல் 3 முறைகள் ☐

3.3 3 முறைக்கு மேல் ☐

4. பிறப்பிற்கு முந்திய காலத்தில் நிலைமைகள்

4.1 இரத்த சோகை ☐

4.2 கர்ப்ப துண்டிய இரத்த அழுத்தம் ☐

4.3 கர்ப்பத்தின் போது நீரிழிவு நோய் ☐

4.4 இல்லை ☐

5. பிரசவத்தின் முதல் நிலை போது வலி மேலாண்மை

5.1 மண்டலிய வலியகற்றல் ☐

5.2 மூச்சிழுத்தல் வலியகற்றல் ☐

5.3 வால் பகுதி தண்டுவடம் வலியகற்றல் ☐

5.4 கூட்டு வால் பகுதி தண்டுவடம் வலியகற்றல் ☐

5.5 இல்லை ☐

6. பிரசவத்தின் வகை

6.1 சாதாரண யோனி பிரசவம் ☐

6.2 பிரசவம் மற்ற முறையில் ☐

7. பிரசவத்தின் முதல் நிலை காலம்

7.1 6 மணி நேரங்கள் ☐

7.2 7 முதல் 9 மணி நேரம் வரை ☐

7.3 10 முதல் 12 மணி நேரம் வரை ☐

7.4 12 மணி நேரத்திற்கு மேல் ☐

8. சிசு சிக்கல்

8.1 தோள்பட்டை பிரச்சினை ☐

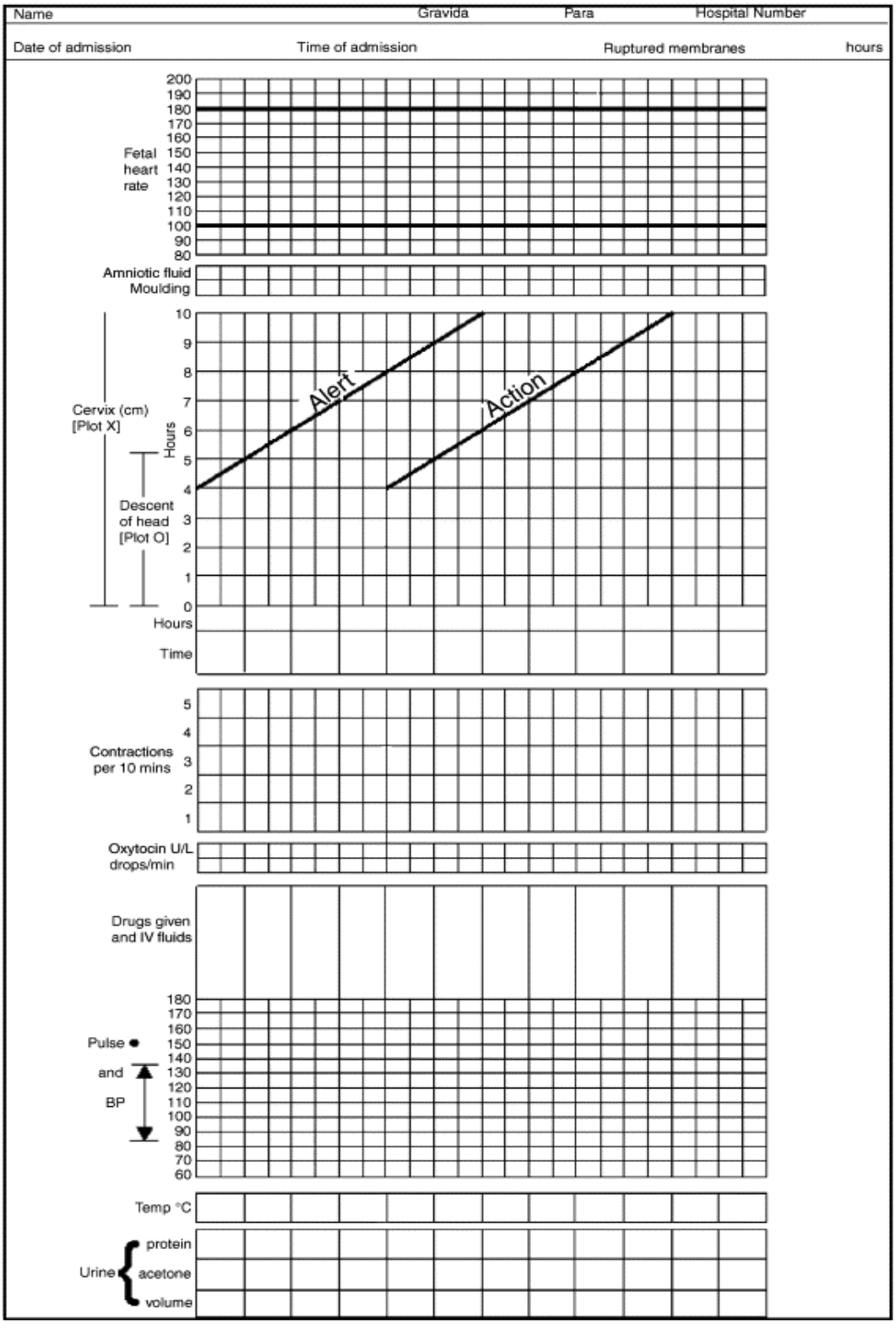
8.2 சுவாச நோய் ☐

8.3 மெகோனியம் அசையும் நோய்க்குறி ☐

8.4 இல்லை ☐

APPENDIX - XV

MODIFIED WHO PARTOGRAPH FOR PRIMIPARTURIENT WOMEN



APPENDIX - XVI

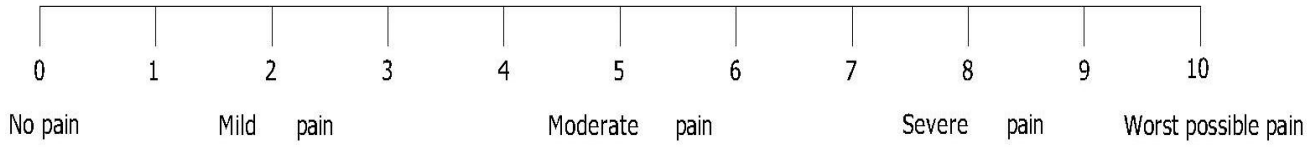
PAIN ASSESSMENT SCALE

Purpose:

The numerical pain intensity scale will be used to measure the pain perception of parturient women before and after Audio Analgesia during first stage of labour.

Instruction:

The investigator will assess the level of pain felt by the participant asking them.



SCORING INTERPRETATION

1 – 3 = Mild

4 – 6 = Moderate pain

7 – 10 = Severe pain

Pain assessment

Hours (Time)	1	2	3	4	5
Assessment of pain Before therapy					
After therapy					

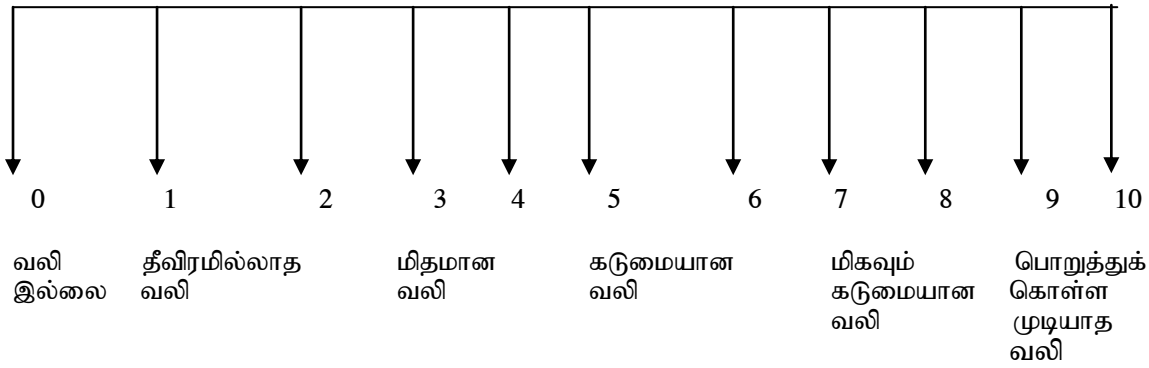
எண்வலி அளவுகள்

நோக்கம்

இந்த அளவுகோல் தாய்மார்களின் முதல்கட்ட பிரசவத்தின் போது ஏற்படும் வலியின் அளவை 1 முதல் 2 மணிக்கு ஒரு முறை சிகிச்சையின் முன்னும் பின்னுமாக அளக்கப் பயன்படுத்தப்படுகிறது.

பங்கு பெறுவோருக்கான குறிப்பு

நீங்கள் எந்த அளவு வலியை உணர்கீறீர்கள் என்பதைச் சுட்டிக் காட்டவும். உங்கள் பதில் ரகசியமாக வைக்கப்படும்.



வலியின் மட்டம்	**கணக்கு**
வலி இல்லை	0
தீவிரமில்லாத வலி	1–2
மிதமான வலி	3-4
கடுமையான வலி	5-6
மிகவும் கடுமையான வலி	7-8
பொறுத்துக் கொள்ள முடியாத வலி	9-10

வலிஅளவு	**1**	**2**	**3**	**4**	**5**
சிகிச்சைக்கு முன்					
சிகிச்சைக்குப் பின்					

APPENDIX -XVII

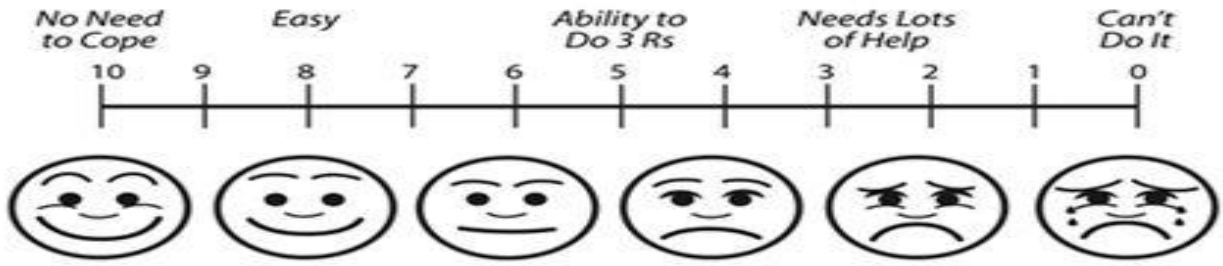
PAIN COPING SCALE

Purpose:

The scale will be used to measure the coping of the mother before and after use of Audio Analgesia during first stage of labor.

Instruction:

Please indicate your level of coping ability during uterine contraction. This response will be kept confidential.



PAIN COPING

SCORES	**LEVEL OF PAIN**
0	Can´t do it
1-3	Needs of lot
4-6	Able to do 3 R´s
7-9	Easy
10	No need to cope

Hours (Time)	**1**	**2**	**3**	**4**	**5**
Assessment of pain coping Before therapy					
After therapy					

வலி சமாளிக்கும் அளவுகோல்

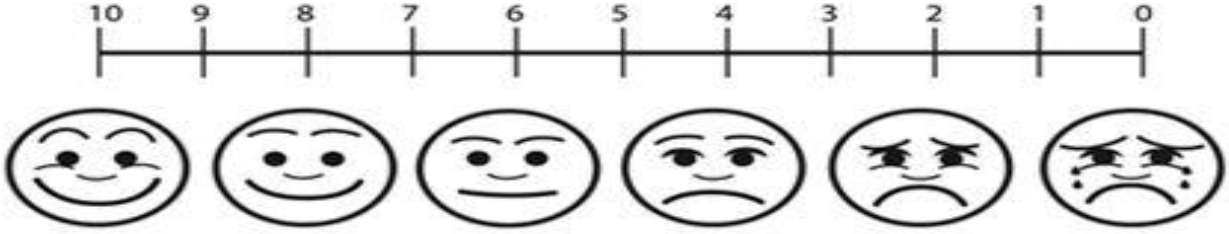
நோக்கம்

இந்த அளவுகோல் பிரசவிக்கும் தாய்மார்களின் முதல் கட்ட பிரசவ வலியின் போது ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) சிகிச்சைக்கு முன்னும், சிகிச்சைக்குப் பின்னும் வலிதாங்கும் நிலையை தெரிந்து கொள்ளப் பயன்ப்படுகிறது.

குறிப்பு

பிரசவ வலியின் போது தங்களின் வலிதாங்கும் நிலைமைக் குறிப்பிடவும். தங்களின் பதில்கள் பகிரிந்துக் கொள்ளப் படமாட்டாது.

வலி தாங்கும் அவசியமில்லை **எளிதாக செய்ய முடியும்** **3 விதத்தில் செய்ய முடியும்** **உதவியுடன் செய்ய முடியும்** **செயலின்மை**



மதிப்பீடு		வலியின் அளவு
0	-	செயலின்மை
1 – 3	-	அதிக உதவியுடன் செய்யமுடியும்
4 – 6	-	3 விதத்தில் செய்ய முடியும்
7 – 9	-	எளிதாக செய்ய முடியும்
10	-	வலிதாங்கும் அவசியமில்லை

நேரம்	1	2	3	4	5
வலிதாங்கும் சிகிச்சைக்கு முன்					
சிகிச்சைக்குப் பின்					

(3 விதம்: தாளம், சடங்கு, இளைப்பாறுதல்)

BLUE PRINT ON RATING SCALE FOR LEVEL OF SATISFACTION

ON AUDIO ANALGESIA DURING THE FIRST STAGE OF LABOUR

S.no	Content	Items	Total items	Percentage
1.	Researcher	**1,2,3,4**	**4**	**40%**
2.	Audio Analgesia	**5,7,8**	**3**	**30%**
3.	Effectiveness of the Audio Analgesia	**6,9,10**	**3**	**30%**
		TOTAL	**10**	**100%**

APPENDIX - XVIII

RATING SCALE ON SATISFACTION OF AUDIO ANALGESIA UPON LABOUR PAIN

Purpose

The rating scale is designed to assess the level of satisfaction of the participant women regarding the Satisfactions of Audio Analgesia. This is assessed by the researcher after delivery.

Instruction

There are items given below. Kindly read the items. Response extends from highly satisfied to dissatisfy. Describe your satisfaction regarding Audio Analgesia. Give response freely and frankly. The response will be confidential.

S.No	Items	Highly satisfied 4	Moderately satisfied 3	Just satisfied 2	Dissatisfied 1
1.	Are you satisfied with explanations about Audio Analgesia given by the researcher?				
2.	Are you satisfied with the availability of the researcher during needed time?				

3.	Are you comfortable with the approach of the researcher?				
4.	Do you feel satisfied with the method of evaluation by the researcher?				
5.	Are you satisfied with the timing of Audio Analgesia given when needed?				
6.	Are you comfortable with the Audio Analgesia?				
7.	Are you satisfied with duration of Audio Analgesia?				
8.	Whether the frequency of Audio Analgesia was satisfactory?				
9.	Are you feeling of relaxed and satisfied with Audio Analgesia?				
10.	Are you satisfied with effectiveness of Audio Analgesia?				

Scoring interpretation

Score	Percentage	Interpretation
12	≤ 40%	Low satisfaction
12-20	40-69%	Moderate satisfaction
21-30	≥70-100%	High satisfaction

SCORING INTERPRETATION

1-3= mild pain

4-6=moderate pain

7-10=severe pain

ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) சிகிச்சையின் திருப்தியை அளக்கும் தர அளவுகோல்

நோக்கம்

இந்த தர அளவுகோல் பிரசவித்த தாய்மார்களின் ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) சிகிச்சையின் திருப்தியின் அளவை அறியப் பயன்ப்படுத்தப்படுகிறது.

குறிப்பு

இங்கு 10 தனிவிவரங்கள் கீழே கொடுக்கப்பட்டுள்ளது. ஒவ்வொரு கேள்வியின் பதிலையும் மிகவும் திருப்தியாக உள்ளதா, மிதமான திருப்தியாக உள்ளதா அல்லது குறைவான திருப்தியாக உள்ளதா, அதிருப்தியாக உள்ளதா என தெரிவிக்கவும். உங்கள் பதில்களைத் தெளிவாக ஒளிவுமறைவின்றித் தெரிவிக்கவும். உங்கள் பதில்கள் ரகசியமாக பாதுகாக்கப்படும்.

வ.எண்	**தனிவிவரம்**	**மிகவும் திருப்தி 4**	**மிதமான திருப்தி 3**	**குறைந்த திருப்தி 2**	**மிகவும் குறைந்த திருப்தி 1**
1.	ஆராய்ச்சியாளர் ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) குறித்துக் கொடுத்த விளக்கம் திருப்திகரமாக உள்ளதா?				
2.	தேவைப்படும் நேரங்களில் ஆராய்ச்சியாளரின் உதவிக்கிடைத்ததில் நீங்கள் எந்த அளவு திருப்தியடைந்தீர்கள்?				
3.	ஆராய்ச்சியாளரின் அனுகுமுறைக் குறித்து உங்களின் திருப்தி?				

4.	ஆராய்ச்சியாளர் சிகிச்சையின் பலனை மதிப்பீடு செய்யும் முறையில் எந்தளவுக்குத் திருப்தியாக இருந்தது?				
5.	ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) தகுந்த நேரத்தில் உங்களுக்கு கொடுக்கப்பட்டதின் திருப்தியின் அளவு?				
6.	ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) உங்களுக்கு இதமானதாக இருந்ததா?				
7.	ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) கொடுத்த காலம் உங்களுக்கு எந்த அளவு திருப்திகரமாக இருந்தது?				
8.	ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) கொடுத்தக் கால இடைவேளை உங்களுக்கு எந்த அளவு திருப்தியாக இருந்தது?				
9.	வலியின் இடையே இளைப்பார முடிந்ததில் உங்களின் திருப்தியின் அளவு?				
10.	ஒலி சார்ந்த வலியகற்றல் (கடல் அலை ஒசை) சிகிச்சையின் பயன்பாட்டில் உங்கள் திருப்தியின் அளவு?				

APPENDIX - XIX

MANUAL FOR AUDIO ANALGESIA

Definition

Audio analgesia is the relief of pain using white sea sound or music without using pharmacological methods while doing painful medical procedures.

Benefits of Audio analgesia

The general benefits include

- Release of tension and anxiety
- Promote comfort
- Aids healing
- Relieves pain improves general health

The benefits in labour includes

- Reduces labor pain
- distract mind from the pain
- Improves coping
- Promotes good contractions
- Aids in progress of labor by reducing the duration of labor

Steps of Procedure

- Ask the patient to close both the eyes
- Ask the patient not to cross the legs
- Ask the patient to bend the neck
- Ask the patient to say I am physically and mentally accepting this treatment
- Ask the patient to recollect the happiest events (thinking heart chakra)

- ❖ Ask the patient recollect the another happiest events (thinking crown chakra)
- ❖ Ask the patient to think both heart chakra and crown chakra at the same time

Auditory stimulation that is recorded tape sea white noise was given to the parturient women by using the head phone at 120 decibels in first stage of labour with duration of 15 to 20 mts and then 1 to 2 hours interval was given. And then it was repeated with the same duration and interval till women reaches the second stage of labor.

And then it was repeated with same duration and interval till women reaches the second stage of labour.

Mechanism of Audio analgesia

The Audio Analgesia stimulates the peripheral nervous system and energy channels thus leading to the release of natural endorphins in the body resulting in decreased pain perception.

APPENDIX -XX

DATA CODE SHEET

EG-Experimental group
AGE-Age in years
1.1.<20
1.2. 21 to 25
1.3. 26 to 30
1.4 ≥31

REL-Religion
2.1. Hindu
2.2. Christian
2.3. Muslim

EDN-Educational qualification
3.1. Illiterate
3.2. Primary school
3.3. High school
3.4. Higher secondary
3.5. Graduate& above

TOW-Type of work
4.1. Sedentary worker
4.2. Moderate worker
4.3. Heavy worker

TOF-Type of family
5.1. Nuclear
5.2. Joint

AOR-Area of residence
6.1. Urban
6.2. Rural
6.3. Semi urban

PK-Previous information regarding Audio Analgesia
7.1. Yes
7.2. No

GA-Gestational age in weeks
1.1. 37 to 39
1.2. 40 to 42

NOAV-Number of antenatal visits
4.1. No visit
4.2. 1 to 3 times
4.3. >3 times

CDANP-Conditions during antenatal period
5.1. Anaemia
5.2.pregnancy induced hypertension
5.3.gestational diabetes mellitus
5.4. None

PMDL-Pain management during labour
6.1. Systemic analgesia
6.2. Inhalational analgesia
6.3. Epidural analgesia
6.4. Combined epidural analgesia
6.5. None

TOD-Type of delivery
7.1. Normal vaginal delivery
7.2. Other mode of delivery

DOFSL-Duration of first stage of labour
8.1. 6 hours
8.2. 7 to 9 hours
8.3. 10 to 12 hours

FC-Fetal complications
9.1. Prolapsed cord
9.2. Respiratory syndrome
9.3. Meconium aspiration syndrome
9.4. Asphyxia neonatrum
9.5 None

BT-Before therapy
AT-After therapy
CD-Cervical dilation
UC-uterine contraction
SBP-systolic blood pressure
DBP-diastolic blood pressure
FHR-fetal heart sound

APPENDIX -XXI

CONTROL GROUP

	DEMOGRAPHIC VARIABLES								OBSTETRICAL VARIABLES									PAIN		COPING		FETO MATERNAL PARAMETERS									
																						CD		UC		SBP		DBP		FHR	
CG	AGE	REL	EDN	TOW	TOF	AOR	PIRA	IF YES	GES AGE	GRAV IDA	PAR ITY	NO AV	CDA NP	PM DL	TOD	DOF OL	FC	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	1.2	2.1	3.5	4.2	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.5	6	6	5.2	4.4	4	6	2	3.6	120	120	80	80	150	148
2	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.4	5.4	4.6	4	4	6	2	4	120	113	80	77	148	147
3	1.3	2.1	3.3	4.3	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.5	6.6	6.6	5.2	4.4	4	6	2	4	120	120	80	80	152	151
4	1.3	2.2	3.5	4.1	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	6.2	6.2	4.8	3.8	4	6	2	4	120	113	80	70	146	145
5	1.2	2.1	3.5	4.1	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	6.2	6.2	4.6	3.8	4	6	2	4	120	120	80	73	156	153
6	1.3	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.2	5.2	4.2	3.6	4	6	3	4	120	120	80	73	140	142
7	1.2	2.1	3.5	4.2	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.4	5.4	4.2	3.6	4	6	3	4	120	120	80	80	148	146
8	1.2	2.1	3.3	4.2	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.2	5.2	5.6	5.2	4	6	3	4	120	120	80	76	156	155
9	1.2	2.1	3.3	4.2	5.1	6.1	7.2	8.5	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.4	5.4	4.2	3.6	4	6	3	4	120	116	80	73	156	154
10	1.2	2.1	3.3	4.2	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.6	5.6	4	3.2	4	6	3	4	120	120	80	73	148	147
11	1.3	2.1	3.3	4.2	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.5	5.8	5.8	4.6	3.8	4	6	3	4	120	120	70	76	150	151
12	1.3	2.1	3.3	4.2	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.2	5.2	4.2	3.6	4	6	3	4	120	120	70	73	148	146
13	1.2	2.2	3.3	4.2	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.4	5.4	4.2	3.6	4	6	3	4	120	120	70	76	146	146
14	1.2	2.2	3.5	4.2	5.2	6.1	7.2	8.5	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	5.4	5.4	4.2	3.4	4	6	3	4	120	120	70	80	150	148
15	1.2	2.1	3.5	4.2	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.4	5.4	4.2	3.4	4	6	3	4	120	120	80	76	148	147
16	1.2	2.1	3.5	4.2	5.2	6.1	7.1	8.1	1.2	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.4	5.4	4.4	3.6	4	6	3	4	120	120	80	80	146	146
17	1.2	2.2	3.5	4.2	5.2	6.2	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.8	5.8	5	4	4	6	2	4	120	120	80	76	152	151
18	1.2	2.2	3.5	4.2	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.4	5.4	4.8	3.8	4	6	2	4	120	113	80	76	140	141
19	1.1	2.1	3.5	4.2	5.2	6.1	7.1	8.1	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	6.2	6.2	4.6	3.6	4	6	2	4	120	120	70	70	148	147
20	1.2	2.1	3.5	4.2	5.2	6.1	7.2	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.5	6.2	6.2	4.4	3.6	4	6	2	4	120	120	80	80	148	146
21	1.2	2.1	3.5	4.2	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	6	6	4.6	3.8	4	6	2	4	120	120	70	76	150	148
22	1.2	2.1	3.5	4.2	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	6	6	5.6	4.6	4	6	2	4	120	120	80	80	148	149
23	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.5	1.2	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.2	5.2	4.2	3.4	4	6	2	4	120	120	80	76	146	146
24	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.8	5.8	5.2	4.6	4	6	2	4	120	120	80	80	142	141
25	1.2	2.1	3.5	4.2	5.1	6.1	7.2	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.2	5.2	4.6	3.8	4	6	2	4	120	120	70	76	148	147
26	1.3	2.1	3.5	4.3	5.1	6.1	7.1	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	5.6	5.6	4	3.2	4	6	3	4	120	120	80	76	152	151
27	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.5	6.2	6.2	5	4	4	6	3	4	120	120	80	80	140	144
28	1.2	2.2	3.5	4.2	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.3	5.2	5.2	4.2	3.6	4	6	3	4	120	120	80	70	148	148
29	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.3	5.6	5.6	4.8	4.2	4	6	3	4	120	120	70	76	150	150
30	1.2	2.1	3.5	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.4	9.3	5	5.8	4.6	3.6	4	6	3	4	120	120	80	80	150	148

EXPERIMENTAL GROUP

CG	DEMOGRAPHIC VARIABLES								OBSTETRICAL VARIABLES									PAIN		COPING		FETO MATERNAL PARAMETERS									
	AGE	REL	EDN	TOW	TOF	AOR	PIRA	IF YES	GA	GRAV IDA	PAR ITY	NO AV	CDA NP	PM DL	TOD	DO FOL	FC	BT	AT	BT	AT	CD		UC		SBP		DBP		FHR	
																						BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	1.2	2.1	3.4	4.1	5.1	6.3	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.4	3.6	4	4.8	4	10	2	4	110	120	70	70	160	140
2	1.1	2.1	3.4	4.1	5.1	6.3	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.3	9.5	5	4	4.6	5.4	4	10	2	4	120	120	80	70	140	147
3	1.2	2.1	3.4	4.1	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.3	9.5	3.8	3	4.2	5	4	10	2	4	120	120	70	80	152	150
4	1.1	2.3	3.4	4.1	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.6	3.6	4.2	5	4	10	2	4	110	110	80	70	150	140
5	1.2	2.1	3.2	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	4.4	3.4	3.4	4.4	4	10	2	4	120	120	70	70	156	140
6	1.2	2.2	3.3	4.1	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.8	4	4.8	5.6	4	10	3	4	110	120	80	70	140	142
7	1.2	2.1	3.2	4.3	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	4.6	3.6	4.2	5	4	10	3	4	120	110	70	70	148	146
8	1.4	2.1	3.1	4.2	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.2	3.4	5	5.8	4	10	3	4	110	120	80	76	160	150
9	1.2	2.2	3.3	4.1	5.2	6.3	7.2	8.5	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4	3.2	4.2	4.2	4	10	3	4	120	110	70	70	156	154
10	1.2	2.1	3.5	4.1	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4	3	4	5	4	10	3	4	110	120	80	70	148	140
11	1.3	2.1	3.5	4.1	5.2	6.1	7.1	8.5	1.1	2.1	3.1	4.2	5.4	6.5	7.1	8.3	9.5	4.2	3.2	3.6	5	4	10	3	4	110	120	70	76	150	151
12	1.2	2.1	3.5	4.1	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	4	3	4.2	4.6	4	10	3	4	120	120	70	73	150	150
13	1.2	2.1	3.1	4.1	5.2	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4	3.2	3.4	5.2	4	10	3	4	120	110	70	80	160	146
14	1.2	2.1	3.5	4.1	5.1	6.1	7.1	8.1	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	3.8	3.2	4	4.6	4	10	3	4	110	120	70	80	150	148
15	1.2	2.1	3.1	4.3	5.1	6.1	7.2	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.2	8.4	9.5	4.8	3.8	5	4.6	4	10	3	4	120	110	80	76	148	140
16	1.4	2.1	3.3	4.1	5.1	6.3	7.1	8.2	1.2	2.1	3.1	4.3	5.4	6.5	7.2	8.2	9.5	5.2	4.4	5	5.8	4	10	3	4	120	120	70	70	146	150
17	1.2	2.2	3.1	4.1	5.2	6.1	7.1	8.3	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	4.4	3.4	4.8	6	4	10	2	4	110	110	80	76	152	151
18	1.2	2.1	3.4	4.1	5.2	6.1	7.2	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.3	9.5	5	3	4.8	5.8	4	10	2	4	110	110	80	76	140	141
19	1.2	2.3	3.1	4.2	5.2	6.1	7.1	8.1	1.2	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.2	3.4	4.6	5.8	4	10	2	4	120	120	70	70	150	147
20	1.2	2.1	3.3	4.1	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	3.4	2.6	5	5.4	4	10	2	4	120	120	70	80	148	150
21	1.2	2.1	3.1	4.1	5.2	6.1	7.1	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.2	3.4	4.8	5.8	4	10	2	4	120	110	70	70	150	148
22	1.4	2.1	3.5	4.2	5.1	6.1	7.2	8.3	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.5	4.8	3.8	4.4	5.6	4	10	2	4	120	120	80	80	148	140
23	1.2	2.1	3.1	4.1	5.1	6.1	7.2	8.5	1.2	2.1	3.1	4.2	5.4	6.5	7.2	8.3	9.5	3.6	3.2	4.2	5.4	4	10	2	4	120	120	80	76	146	146
24	1.2	2.2	3.3	4.2	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.2	5.4	6.5	7.2	8.4	9.5	4.2	3.4	4.8	4.8	4	10	2	4	120	110	70	80	150	140
25	1.2	2.1	3.1	4.1	5.2	6.1	7.2	8.5	1.1	2.1	3.1	4.2	5.4	6.5	7.2	8.4	9.5	5	4.2	4	5	4	10	2	4	110	120	70	70	140	147
26	1.4	2.3	3.4	4.1	5.1	6.1	7.1	8.1	1.1	2.1	3.1	4.3	5.4	6.5	7.2	8.4	9.5	3.8	3	4.6	4.8	4	10	3	4	110	110	80	76	152	151
27	1.2	2.1	3.1	4.2	5.2	6.1	7.1	8.3	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.5	4.2	3.2	4.2	5	4	10	3	4	120	120	70	80	150	140
28	1.2	2.2	3.3	4.1	5.1	6.1	7.1	8.3	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.3	4.6	3.6	4.8	4.8	4	8	3	4	110	120	80	80	140	150
29	1.2	2.1	3.1	4.2	5.1	6.1	7.1	8.2	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.3	9.3	4	3.2	4.2	5.6	4	8	3	4	120	110	70	80	150	150
30	1.2	2.3	3.4	4.2	5.1	6.1	7.2	8.5	1.1	2.1	3.1	4.3	5.4	6.5	7.1	8.4	9.3	4	3.4	4.2	5	4	8	3	4	120	110	70	80	140	140

APPENDIX -XXII

PHOTOGRAPHS DURING AUDIO ANALGESIA