EFFECTIVENESS OF MUSIC THERAPY ON

LEVEL OF BREAST MILK SECRETION AMONG

POSTNATAL MOTHERS

DISSERTATION SUBMITTED TO THE TAMIL NADU Dr. M. G. R. MEDICAL UNIVERSITY, CHENNAI IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE OF MASTER OF SCIENCE IN NURSING OBSTETRICS AND GYNAECOLOGICAL NURSING

APRIL 2016

CERTIFICATE

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EFFECTIVENESS OF MUSIC THERAPY ON LEVEL OF BREAST MILK SECRETION AMONG POSTNATAL MOTHERS IN SELECTED HOSPITAL, KANYAKUMARI DISTRICT

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ACKNOWLEDGEMENT

This dissertation is the fruitful culmination of the valuable guidance and assistance of several people to whom the investigator will always be indebted to.

I greatly and sincerely indebted to the **"God Almighty"** for his endless grace, love, care and blessings showered on me to complete and for presenting this dissertation successfully.

I express my honest and sincere gratitude to **Rev. Fr. Jaya Prakash.S, Correspondent** and **Rev.Fr. Godwin, Bursar** of St. Xavier's Catholic College of Nursing, Chunkankadai for giving me the precious opportunity to be a part of this esteemed institution.

I wish to express my heart full gratitude to **Dr. A. Reena Evency, M.Sc. (N),Ph.D, Principal**, St. Xavier's Catholic College of Nursing, Chunkankadai, for her valuable support, suggestions and direction to complete the study in a successful way.

I express my respectful thanks to **Mr. A. George Joe Kumar, M.Sc(N), Class Co-Ordinator** for his valuable suggestions and continuous support which made my study smooth and successful.

It is the most pleasant time to express my respectful thanks to **Mrs. S. Anita Mary Leena, M.Sc. (N), Head of the Department**, Obstetrics and Gynaecological Nursing for her constant support, suggestions and encouragement at each level of this study.

I express my sincere and exclusive thanks to my clinical specialty guide **Mrs. D. Shiny Mary, Assistant Professor** for her best guidance in the path of research activities, which helped me to do my study in successful way.

I extend my thanks to **Dr. A. Judie, M.Sc.(N), Ph.D, DSc, Dean** of S.R.M College of Nursing ,S.R.M University for her best guidance in the path of research activities.

It is the most pleasant time to express my sincere and exclusive thanks to **Mrs. S. Jenila and Mrs. N. V. Brindha, M.Sc.(N)** Assistant professors of the Department of Obstetrics and Gynaecological Nursing for their innovative and constant effort to ensure the best quality in my work, which helped me to do my study in successful way.

I also extend my sincere thanks to the **Advisory Committee** and the **Experts of the College** for their guidance in the path of research activities.

I extend my sincere thanks to **Dr. Immanuel, Ph.D.** Biostatistician and **Rev.Fr. Stephen**, for their support and guidance in statistical analysis and interpretation of data.

I also take the opportunity to express my special thanks to **Mrs. Selestine Mary and Mrs. Sweety** Librarian, St. Xavier's Catholic College of Nursing, Chunkankadai, for helping me to review and for extending library facilities throughout the study.

I express my sincere gratitude to **Dr. F. Caroline Felicia Mary. M. D, DGO,** Director and Consultant, Caroline John Hospital, Nagercoil for validating the tool, and for her constant guidance and valuable suggestions.

I am greatful to **Dr. Felsit Punitha M. D. DGO**, Obstetric consultant, P.P.K. Hospital, Marthandam, who gave me the opportunity to do data collection in their hospital and also I extend my heartfelt gratitude to the Management of P.P.K. Hospital, Marthandam, for giving me the permission to conduct this study.

I wish to express my sincere thanks to the **Participants** of this study and staff nurses of Caroline John Hospital Nagercoil and P.P.K. Hospital, Marthandam for their co-operation and best wishes.

I express special thanks to **Mano Xerox** for their excellent and untiring efforts in materializing my dissertation work.

I am indebted, blessed and lucky to have**,** my parents **Mr.M.Chellathangam** and **Mrs.kausalya Chellathangam** and Sister **Ms. Sarah Chellathangam** for their fruitful prayers, endless patience, inspiration and support throughout this endeavour.

(SHARON CHELLATHANGAM)

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ABSTRACT

A quasi experimental study was conducted to evaluate the effectiveness of music therapy on level of breast milk secretion among postnatal mothers in selected hospital, Kanya Kumari district.

Quasi experimental, pretest and post test control group design was adopted for this study. Purposive sampling technique was used to assess the effectiveness of music therapy. Out of the 60 samples, 30 samples were in study group and 30 samples in control group. The data was collected from the selected postnatal mothers and the Modified Christi breast feeding assessment tool was used to assess the level of breast milk secretion. Demographic variables like age, education, occupation, Religion, type of food and parity were selected. The researcher provided music therapy to the study group. The researcher conducted

the study for a period of 4 weeks. The post assessment was conducted in the study group and control group.

The findings reveals that, in study group, the mean score on level of breast milk secretion among postnatal mothers in study group was 2.47 in pre assessment and 5.90 in post assessment respectively. The estimated 'unpaired t' value was 17.25 which was significant at $p < 0.05$. Hence the research hypothesis (H_1) is accepted. The mean score on level of breast milk secretion among postnatal mothers in study group was 7.34 and in control group was 5.90. The estimated unpaired "t" value was 4.91 which is significant at $p<0.05$. It shows that Music Therapy was effective and improved the level of milk secretion. Hence the research hypothesis (H_2) is accepted. In Study group and in control group the Calculated value of demographic variables were lesser than the table value which indicates that, there is no significant association between breast milk secretion and demographic variables . Hence the hypothesis (H_3) is not accepted. As per the study the researcher concludes that the Music therapy had an effect on level of breast milk secretion and improves it.

CHAPTER I
INTRODUCTION

Women accommodate half of the population of the world which means half power of the world. Without woman nothing is possible for men, they are basic unit of the society, they make a family, family make a home, home make a society and ultimately societies make a country. So the contribution of a woman, is everywhere from taking birth, giving birth to a baby, to care for whole life and other areas. All the roles and responsibilities of the women can never be neglected by the societies. There are many ways and valid reasons for women to honour and embrace all that they are. When any individual woman chooses to do so, all women collectively move closer to becoming what they are truly capable of being. By honoring the experience and being willing to share it with others both male and female, a woman teaches through learning. When a women can trust herself and her inner voice, then teaches those around her to trust her as well. Clasping hands with family members and friends, coworkers and strangers in a shared walk through the journey of life, also allows all to see the self-respect possessed and accepts their respect that is offered through look, word, and deed.

Motherhood is the highest, holiest service assumed by humankind. It's the definition of selfless service. It's both a daunting responsibility and a glorious opportunity. The divine role of motherhood is a gift from God, and key to his plan of happiness for all his babies. Being a mother is so much more than a biological process.

A postpartum period or postnatal period is the period beginning immediately after the birth of a child and extending for about six weeks. Less frequently used are the terms puerperium or puerperal period. The World Health Organization (WHO) describes the postnatal period as the most critical and yet the most neglected phase in the lives of mothers and babies; most deaths occur during the

postnatal period. It is the time after birth, a time in which the mother's body, including hormone levels and uterus size, returns to a non-pregnant state. Lochia is postpartum vaginal discharge, containing blood, mucus, and uterine tissue. A woman giving birth in a hospital may leave the hospital as soon as she is medically stable and can be as early as a few hours postpartum, though the average for a vaginal birth is 1–2 days, and the average caesarean section postnatal stay is 3–4 days. During this time, the mother is monitored for vital signs, bleeding, bowel and bladder function. The babies health is also monitored. The mother is assessed for tears, and is sutured if necessary. Also, the mother may suffer from constipation or hemorrhoids, which would be managed. The bladder is also assessed for infection, retention, and any problems in the muscles. The major focus of postpartum care is ensuring that the mother is healthy and capable of taking care of her newborn, equipped with all the information she needs about breastfeeding, reproductive health , contraception and the imminent life adjustment.

Breast milk is the milk produced by the breasts (or mammary glands) of a human female for her baby offspring. Breast milk is a unique nutritional source that cannot adequately be replaced by any other food, including baby formula. It provides the ideal nutrition for babies. Breast milk has a nearly perfect mix of vitamins, protein, and fat, everything baby needs to grow. All nutrients are provided in a form more easily digested than baby formula. Breast milk contains antibodies that help baby fight off viruses and bacteria. Although pollutants can accumulate in breast milk, it remains superior to baby formula from the perspective of the overall health of both mother and baby. Babies are fragile and susceptible to disease partly, because their bodies are not fully developed. They must be treated with special care and given adequate nourishment. Baby formulas are able to mimic a few of the nutritional components of breast milk, but formula cannot hope to duplicate the vast and constantly changing array of essential nutrients in human milk. Breast milk is the primary source of nutrition for newborns before they are able to eat and digest other

foods; older Babies and toddlers may continue to be breastfed, either exclusively or in combination with other foods.

Babies who are breast-fed longer have fewer dental cavities throughout their lives. It is identified that babies who were breast-fed are significantly less likely to become obese later in childhood. Formula feeding is linked to about a 20 to 30 percent greater likelihood that the baby will become obese. Babies who are exclusively breast-fed during the first three months of their lives are 34 percent less likely to develop juvenile, insulin-dependent diabetes than babies who are fed formula. Breast feeding may also decrease the risk of babyhood cancer in babies under 15 years of age. Formula-fed babies are eight times more likely to develop cancer than babies who are nursed for more than six months. (It is important to note that babies who are breast-fed for less than six months do not appear to have any decreased cancer risk compared to bottle-fed babies). As babies grow into adults, several studies have shown that people who were breast-fed as babies have lower blood pressure on average than those who were formula-fed. Thus, it is not surprising that other studies have shown that heart disease is less likely to develop in adults who were breast-fed in infancy. Significant evidence suggests that breast-fed babies develop fewer psychological, behavioral and learning problems as they grow older. It also indicate that cognitive development is increased among babies whose mothers choose to breastfeed. In researching the psychological benefits of breast milk, one researcher found that breast-fed babies were, on average, more mature, assertive and secure with themselves as they developed.

Babies have a sucking reflex that enables them to suck and swallow milk. Experts recommend babies be breastfed within one hour of birth, exclusively breastfed for the first six months, and then breastfed until age two with age-appropriate, nutritionally adequate and safe complementary foods. Breastfeeding was the rule in ancient times up to recent human history, babies were carried with the mother and fed as required. With 18th and 19th century industrialization in the Western world, mothers in many urban centers began dispensing with breastfeeding due to

their work requirements. Breastfeeding declined significantly from 1900 to 1960, due to increasingly negative social attitudes towards the practice and the development of baby formula. From the 1960s onwards, breastfeeding experienced a revival which continues to the 2000s, though some negative attitudes towards the practice still remain.

Promoting breastfeeding is a well-known, simple, and efficient strategy to decrease morbidity and mortality in babies all over the world (Jones, Steketee, Black, Bhutta, Morris & the Bellagio Baby Survival Study Group, 2003), therefore, any intervention that can increase breastfeeding rates may be of interest to healthcare personnal.

Music therapy has been shown to have positive effects in several areas, such as mental health, special education, rehabilitation, and social development. **Amber A C et al (2015**) conducted a study on the effect of music listening on relaxation level and volume of breast milk pumped by mothers of babies in the neonatal intensive care unit, Lexington .Results indicated that there was a significant increase in relaxation scores in the music group. Studies have demonstrated that music therapy can reduce maternal anxiety, helping mothers to cope with their babies stay in the neonatal intensive care unit (NICU), and also influences preterm behavior, providing greater periods of quiet sleep states, less crying, and an increase in weight gain (Lai et al, 2006; Cevasco, 2008; Kemper & Hamilton, 2008; Keith, Russell & Weaver, 2009).

BACKGROUND OF THE STUDY

Breastfeeding is the basic food that has long-lasting impacts on a baby's health and development. It helps to build a very unique and strong emotional bonding between the mother and her baby. This has also been supported and proved scientifically. Human milk is the optimal source of nutrition for the baby and young babies and has bioactive components that safeguard baby's growth and development.

Breastfeeding offers protection against infectious disease related morbidity and mortality in Babies. Optimum growth and development is acquired through exclusive breastfeeding.

Breastfeeding strengthens the immune system. During nursing, the mother passes antibodies to the baby, which helps the baby resist diseases and help improve the normal immune response to certain vaccines. Respiratory illness is far more common among formula-fed babies. In fact, an analysis of many different research studies concluded that babies fed with formula, face a threefold greater risk of being hospitalized with a severe respiratory infection than the babies breast-fed for a minimum of four months. Diarrhea is three to four times more likely to occur in babies fed formula than those fed with breast milk. Breastfeeding has been shown to reduce the likelihood of ear infections, and to prevent recurrent ear infections. In developing countries, differences in infection rates can seriously affect a baby's chances for survival. Researchers have observed a decrease in the probability of Sudden Baby Death Syndrome (SBDS) in breast-fed babies. Another apparent benefit from breastfeeding may be protection from allergies. Eczema, an allergic reaction, is significantly rarer in breast-fed babies. A review of 132 studies on allergy and breastfeeding concluded that breastfeeding appears to help protect babies from developing allergies, and that the effect seems to be particularly strong among babies whose parents have allergies.

Breast feeding not only the baby, it also provides benefits to the mother. Breastfeeding reduces the risk of breast cancer. Women who breastfeed reduce the risk of developing breast cancer by as much as 25 percent. The reduction in cancer risk comes in proportion to the cumulative lifetime duration of breastfeeding. That is, the more months or years a mother breastfeeds, the lower her risk of breast cancer. It also reduces the risk of uterine and ovarian cancer. One of the reasons for the cancer-fighting effects of breastfeeding is that estrogen levels are lower during breast milk secretion. It is thought that the less estrogen available to stimulate the lining of the

uterus and breast tissues are less the risk of these tissues becoming cancerous. Non-breastfeeding women have a four times greater chance of developing osteoporosis than breastfeeding women and are more likely to suffer from hip fractures in the post-menopausal years. Breast feeding benefits for baby spacing.

According to the **United Nations International Children's Emergency Fund** (**UNICEF)** report in 2014, 17 per cent showed an exclusive breastfeeding rate greater than or equal to 50 per cent and without any decline as of the past five years. Of those 27 countries, 13 had seen a significant increase in rates of exclusive breastfeeding (at least 10 percentage points). In order to improve rates of exclusive breastfeeding, UNICEF supported countries in strengthening policies and legislation, promoting behavioural change communication strategies, building the capacities of governments and partners, and increasing the availability of counselling and mother support groups.

According to **World Health Organisation (WHO)** report on Breast Feeding week 2015, In the last two decades, baby mortality has decreased considerably, but close to 7 million babies under five years of age still die each year, mainly from preventable causes. Of those, newborn deaths now represent nearly half of all baby deaths under five years. Immediate breastfeeding (i.e.) putting the baby to the mother's breast within an hour after birth would significantly reduce neonatal mortality. While breastfeeding rates are no longer declining at the global level, with many countries experiencing significant increases in the last decade, only 39 per cent of babies less than six months of age in the developing world are exclusively breastfed and just 58 per cent of 20-23 month olds benefit from the practice of continued breastfeeding. A growing number of countries are demonstrating that significant and rapid progress is possible, with 25 countries showing increases of 20 percentage points or more.

According to the **World Breastfeeding Trends Initiative** report 2012, India ranked 31 out of 51 countries from the survey. Only eight million of the 26 million babies born in India every year are breastfed within an hour of birth. In breastfeeding practices , the report found only 46 percent of newborns in India were breastfed in the first 24 hours of their birth.

According to the report by the **National Nutrition Monitoring Bureau (NNMB)** 2012 in rural India says that in Tamil Nadu about 6 per cent of babies, including those in the 0-5 months age group, are not being breast-fed at all. According to the survey, In Tamil Nadu the proportion of babies not breast-fed in all age groups were covered 0-5 months, 6-11 months and 12-35 months. In the 0-5 months category 5.8 per cent of babies are not breast-fed. This climbs to 16.7 per cent in the 6-11 months category and about 70 per cent in the 12-35 months category. Today many health authorities consider human breast milk the healthiest form of milk for babies. Breastfeeding promotes the health of both the mother and the baby. Longer breastfeeding has also been associated with better mental health through childhood and into adolescence.

The use of music as a complementary tool in health promotion has recently been reported in medical literature. Defined as the therapeutic use of music or musical activities in the treatment of somatic and mental diseases, music therapy has accumulated scientific evidence of its effectiveness in pain management, anxiety and emotional stress, among other conditions. In obstetrics, it has been identified that the fetus responds to musical stimuli and the human voice, with increased heart rate and movements, the levels being significantly higher than response to a sham stimulus. It is found that music therapy sessions (listening to music passively), favorably influence the feeling of comfort, and also reduce levels of stress and anxiety during labor and birth.

Music therapy has shown that it reduces stress for parents and premature babies in the NICU. Music therapy can improve physiological parameters of newborns, reduce weight loss and decrease the length of stay in ICU and in hospital. Music therapy may increase breastfeeding rates among mothers of premature newborns.

SIGNIFICANCE AND NEED FOR THE STUDY:

The promotion of breastfeeding is a known strategy, simple and efficient in reducing morbidity and mortality in babies worldwide. The milk produced by the mother of a preterm baby in the first four weeks after delivery contains a higher concentration of nitrogen, proteins with immunological functions, total lipids, medium-chain fatty acids, vitamins A, D and E, calcium, sodium and energy than that produced by mothers of a full-term baby . If the baby cannot suck directly at the breast, baby must receive the expressed milk.

Breast milk has the right proportions of proteins, carbohydrates, fats and other nutrients which a baby needs to grow and develop. It is easy to digest. Unlike proteins found in regular cow's milk, the proteins in breast milk are naturally gentle and easy to digest. Bio-available iron is present in breast milk. It Contains iron that is easy for baby to digest. The quantity of iron in breast milk may be low, but its bio-availability makes it significant for the baby. It builds tolerance, helps to protect the baby against early food allergies, protein intolerance and sensitivity. It provides natural protective antibodies and other immune-related benefits. It provides an opportunity for bonding with mother and baby vice versa. It reduces the risk of diarrhea and respiratory illnesses.

The advantages for the mother during Breast milk secretion are that it stimulates the production of oxytocin hormone, uterus to contract and return to its pre-pregnancy size, helps to burn extra calories, lowers fat stores, helping to go back

to pre-pregnancy weight more quickly**,** provides the opportunity for snuggling, bonding and skin-to-skin contact**,** less chance of developing osteoporosis and breast or ovarian cancer later in life.

Punitha Mary., (2009) Conducted an experimental study to evaluate the effectiveness of music therapy on Breast milk secretion among primi postnatal mothers in selected Hospital, Bangalore. The sample size was 100. Non equivalent post test only design and observation check list were used. The study concluded that the music therapy automatically produced more milk in ducts.

Federal do Rio.J.,(2009) conducted a Randomized Controlled Trial to evaluate the effects of music therapy on Breastfeeding Rates among mothers of Premature Newborns, Brazil. A sample size of 120 (60 control group and 60 interventional group). Music therapy sessions systematically offered to all mothers in the intervention group, three times a week, not mandatory, conducted by two music therapists in an appropriate room, during 60 minutes. The study concluded that music therapy increased the production of breast milk in mothers of premature newborns.

Martha N. S.et al.,(2011) conducted a Randomized Controlled Trial to evaluate the impact of music therapy on breastfeeding rates among mothers of premature newborns. In this mothers of premature neonates weighting $\leq$ 1,750 g were submitted to music therapy sessions three times a week for 60 minutes. Music therapy had a significant effect in increasing breastfeeding rates among mothers of premature newborns at the first follow-up visit, and also a positive influence (although not significant) that lasted up to 60 days after baby discharge.

Music Therapy has an influence on breast milk secretion. The mechanism of music therapy on Breast milk secretion is that the music therapy stimulates the central nervous system (Hypothalamus). The Hypothalamus conducts the impulses to autonomic nervous system which provides relaxation to the mother which in turn stimulates the sympathetic nervous system and signals the posterior

pituitary gland. The posterior pituitary gland produces the oxytocin hormone which stimulates the contraction of the myoepithelial cells surrounding the alveoli, which holds the milk and produces breast milk secretion.. Thus the breast milk is secreted by the influence of Music therapy.

As per review mentioned above, the researcher personally identified that music therapy improves breast milk secretion. During the clinical visit as obstetrical and gynaecological nurse, the researcher found many postnatal mothers suffering with poor breast milk secretion and requesting for providing their babies with formula feeds. So the researcher selected this study with interest to improve the breast milk secretion through music therapy .

This study aims to study the effectiveness of music therapy on level of breast-milk secretion. Music therapy aims to reduce the stress in mother and indirectly influence the amount of breast milk secreted.

STATEMENT OF THE PROBLEM

A study to evaluate the effectiveness of music therapy on level of breast milk secretion among postnatal mothers in selected hospital, Kanya Kumari District.

OBJECTIVES OF THE STUDY

1. To asses and compare the pre assessment and post assessment on level of breast milk secretion among postnatal mothers.

2. To evaluate the effectiveness of music therapy on level of breast milk secretion among postnatal mothers in study group and control group.

3. To associate the post assessment on level of breast milk secretion among postnatal mothers with the selected demographic variables in the study group and control group.

HYPOTHESES

H_1: There is a significant difference between pre assessment and post assessment level of breast milk secretion among postnatal mothers in study group and control group.

H_2: There is a significant difference between post assessment level of breast milk secretion among postnatal mothers in study group and control group.

H_3. There is a significant association between post assessment level of breast milk secretion among postnatal mothers with the selected demographic variables in study group and control group.

OPERATIONAL DEFINITION

Evaluate : It refers to the effectiveness of music therapy on level of breast milk secretion among postnatal mothers in study group and control group.

Effectiveness : It refers to the outcome of music therapy on level of breast milk secretion among postnatal mothers in study group.

Music therapy : Instrumental music based on Anandabairavi Ragam which is played to the postnatal mothers through earphone every morning for 30 minutes for 6 days from the day of delivery.

Breast milk secretion: It refers to through hearing music, the ejection of breast milk that is produced by the mammary gland of the mother in the postnatal period which is measured by Modified Christi Breast Feeding Assessment Tool.

Postnatal Mothers: It refers to all mothers who underwent lower segmental cesarean section.

ASSUMPTION

- Music Therapy may have some effect on level of breast milk secretion among postnatal mothers.
- The level of breast milk secretion may vary from mother to mother.

DELIMITATION

The study is delimited to

1. Postnatal mothers who had undergone lower segmental cesarean section.

2. Postnatal mothers who have discharged before 6^{th} day.

3. A period of four weeks.

PROJECTED OUTCOME

- The study will enable the nurse to identify the effectiveness of music therapy on level of breast milk secretion in study group.
- It provides an opportunity for the nurse to encourage mothers to hear music during their postnatal period to improve breast feeding.
- The study will help the mothers to know the importance of music therapy.

CONCEPTUAL FRAMEWORK

WIDENBACH'S PRESCRIPTIVE HELPING ART OF CLINICAL NURSING THEORY (1964)

The conceptual framework or model is a phenomenon made up of concepts that are the mental images of a phenomenon. These concepts are linked together to express their relationship between them. A model is used to denote symbolic representation of concepts.

This study intends to evaluate the effectiveness of Music Therapy on breast milk secretion among postnatal mothers. The investigator adopted the Ernestine **Widenbach's Prescriptive Helping Art of Clinical Nursing Theory (1964).** Widenbach's prescriptive theory directs action towards an explicit goal. According to this theory, nursing practice consists of three steps which include,

Step1- Identifying the need for help

Step 2- Ministering the needed help

Step 3- Validating that the need for help was met.

Step 1- Identifying the need for help

In this study the Investigator identifies the need for help by assessing the demographic variables (Annexure VII) and the pre assessment of the level of breast milk secretion among postnatal mothers using modified Christi breast feeding assessment tool(Annexure VII).

Step 2- Ministering the needed help

Ministering the needed help refers to the provision of required help to fulfill the identified needs. It has 2 components.

Prescription and Realities:

- Prescription- In this study prescription refers to Music Therapy.
- Realities- Refers to
    - ❖ Agent-The investigator who renders the Music Therapy.

- ❖ Recipient-The postnatal mothers undergone Lower Segmental caesarean section.
- ❖ Goal- To improve the Breast milk Secretion.
- ❖ Means and activity- Providing Music Therapy
- ❖ Framework-Denotes the setting in which the care is rendered. (P.P.K. Hospital)

Step 3 -Validating that the need for help was met

This step involves the assessment of level of breast milk secretion after rendering Music Therapy. Post assessment involves the assessment of level of breast milk secretion using modified Christi breast feeding assessment tool (Annexure VII). Level of breast milk secretion is categorized as adequate, moderate and inadequate breast milk secretion. Two possible outcomes are improving the level of breast milk secretion in the study group and not inducing the breast milk secretion of control group.

Feed Back

The level of breast milk secretion had moderate and adequate progress in Postnatal mothers after giving Music Therapy in study group. There was inadequate and moderate progress in level of breast milk secretion in control group. At the end of the study, the researcher explained about the effectiveness of Music Therapy to the postnatal mothers in inadequate and moderate level of breast milk secretion in in study and control group. The researcher provided CD for the postnatal mothers of the study group and control group to practice at home.

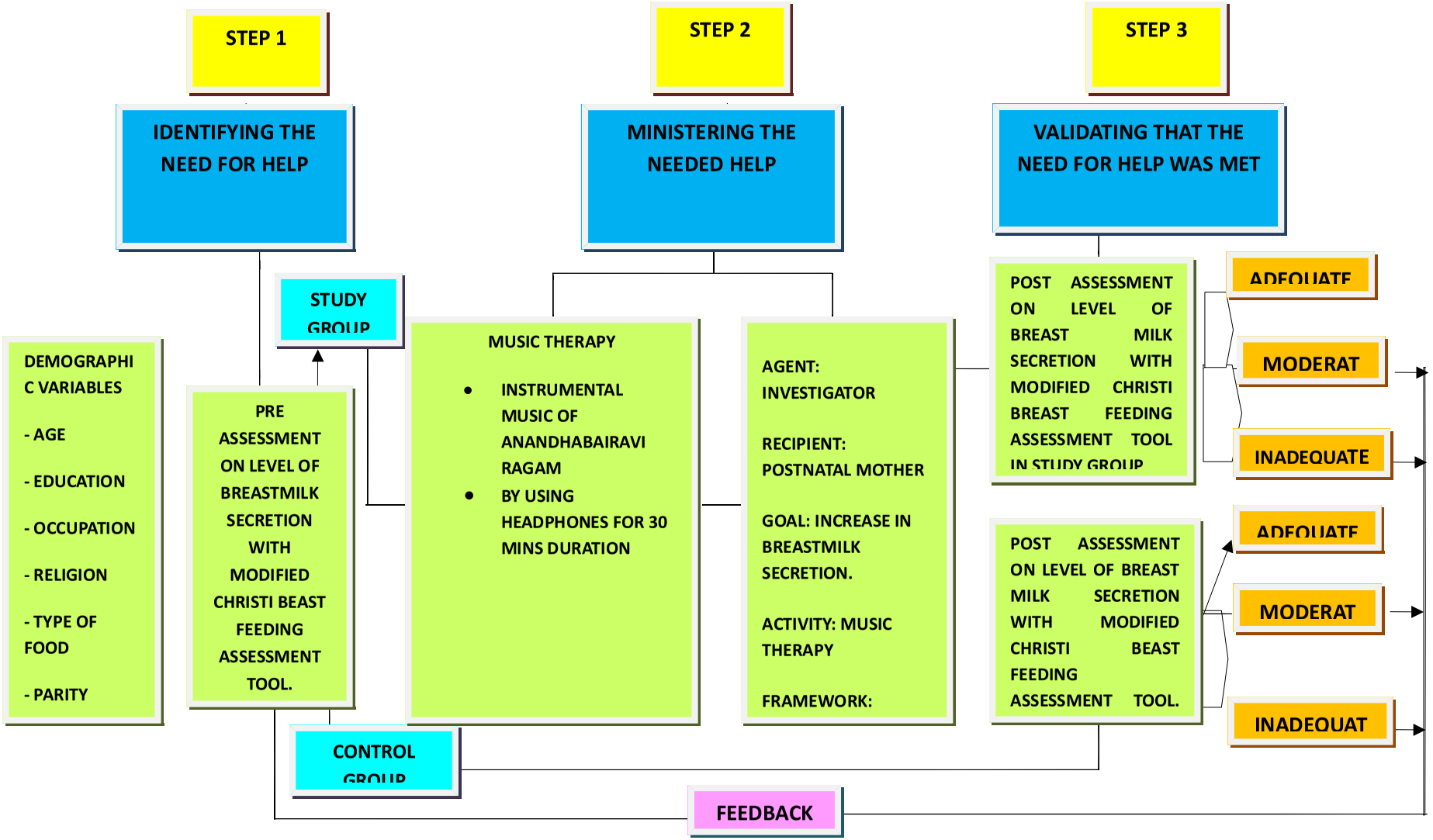

Figure 1: Modified Widenbach's Prescriptive Helping Art of Clinical Nursing Theory (1964)

CHAPTER II

REVIEW OF LITERATURE

Review of literature is a vital component is the research process. It gives the researcher orientation to the study. It provides the source of research ideas for the new researcher.

The review of literature is presented under the following headings. Review of literature is related to,

Section A: Studies related to Breast Feeding.

Section B: Studies related to Other Therapies on Breast Feeding.

Section C: Studies related to Music Therapy on Breast Feeding.

STUDIES RELATED TO BREAST FEEDING

Guise.J.M, et al.,(2014) conducted a study to evaluate the effectiveness of breastfeeding on the risk of developing babyhood leukemia in United States. The sample size was 100. Methodology quality was evaluated for each study by using criteria from the US Preventive Services Task Force and the National Health Service Centre for Reviews and Dissemination. The study result identified that breastfeeding was associated with a significant risk reduction in one study with longer breastfeeding duration, reflecting greater protection, and no significant but suggestive difference in the other. The study concluded few high-quality studies that examine the potential for a protective effect of breastfeeding for babyhood leukemia. Furthermore half of the studies associated breastfeeding with a lower risk of acute lymphocytic leukemia.

studies were identified that provided data on the relationship between breastfeeding and SBDS risk. Two teams of 2 reviewers evaluated study quality according to preset criteria. Univariable and multivariable odds ratios were extracted. The result stated that Breastfeeding is protective against SBDS, and this effect is stronger when breastfeeding is exclusive. The recommendation to breastfeed Babies should be included with other SBDS risk-reduction messages to both reduce the risk of SBDS and promote breastfeeding for its many other baby and maternal health benefits.

Jacobs.,(2014) conducted a case-cohort study investigating breast-feeding and risk of type 2 diabetes which nested within the European Prospective Investigation into Cancer and Nutrition (EPIC)-Potsdam. The sample size was 1,262 child bearing women. Self-reported lifetime duration of breast-feeding was assessed by questionnaire. Blood samples were used for biomarker measurement (HDL-cholesterol, triacylglycerols, C-reactive protein, fetuin-A, γglutamyl transferase, adiponectin). The study result is that additional 6 months of breast-feeding was 0.73. Meta-analysis of three previous prospective studies and the current study revealed an inverse association between breast feeding duration and risk of diabetes. The study concluded longer duration of breast feeding may be related to a lower risk of diabetes. This potentially protective effect seems to be reflected by a more favourable metabolic profile, however, the role of body weight as a mediator.

Somayeh,et al.,(2014) conducted a study to determine the effect of educational program on Breastfeeding self-efficacy and duration of exclusive breastfeeding in pregnant women in Ahvaz, Iran. *Methods*. This randomized controlled trial was conducted on 120 nulliparous pregnant women who tended to breastfeed. The primary self-efficacy scores of samples were measured using Faux and Dennis breastfeeding self-efficacy questionnaire. Women were randomly

were analyzed by means of descriptive and inferential statistics. *findings*. The breastfeeding self-efficacy in the intervention group increased significantly compared to the control group one month after delivery (123.6 versus 101.7,). The duration of exclusive breastfeeding was significantly higher in the intervention group (5.03 versus 2.7 mo,). Also, there was a significant relationship between breastfeeding self-efficacy and duration of exclusive breastfeeding. *Conclusion*-The educational program could increase the self-efficacy and exclusive breastfeeding duration of mothers. These results can draw the attention of authorities to the importance of educational programs for mothers regarding the exclusive breastfeeding.

Saleem.et al.,(2014) conducted a cluster-randomized interventional trial at peri-urban settings of Karachi to evaluate the impact of maternal educational messages regarding appropriate complementary feeding (CF) on the nutritional status of their Babies after 30 weeks of educational interventions delivered by trained community health workers. Mothers in the intervention group received three education modules about breastfeeding (BF) and appropriate CF at a baseline visit and two subsequent visits 10 weeks apart. The control group received advice about BF according to national guidelines. Babies' growth [weight, length, and mid-upper arm-circumference (MUAC), stunting, wasting, and underweight] were measured at four time points. At the end of the study, Babies in the intervention group had a higher mean weight of 350 g (p=0.001); length of 0.66 cm (p=0.001), and MUAC of 0.46 cm (p=0.002) compared to the controls; proportionate reduction of stunting and underweight were 10% (84% vs 74%) OR 8.36 (5.6-12.42) and 5% (25% vs 20%)OR 0.75 (0.4-1.79) in the intervention compared to the control group. For relatively food-secure populations, educational interventions about appropriate CF to mothers had a direct positive impact on linear growth of their Babies.

Congo. All 66 mothers interviewed were breastfeeding. The study result was before initiating breastfeeding, 23 gave their Babies something other than their milk, including: sugar water (16) or water (2). During the twenty-four hours prior to interview, 26 (39%) Babies were exclusively breastfed (EBF), whereas 18 (27%), 12 (18%), and 10 (15%) received water, tea, formula, or porridge, respectively, in addition to human milk. The main reason for water supplementation is heat and cultural beliefs that water is needed for proper digestion of human milk. The study concluded that facilities lacked any written policy about breastfeeding. Addressing cultural beliefs, training healthcare providers adequately on breastfeeding support skills, and providing structured breastfeeding support after maternity discharge is needed.

Huff.,(2012) conducted the prospective longitudinal cohorts study to assess the differences in breastfeeding duration by pre pregnant maternal weight status, and determined whether body image concerns mediated any differences. The sample size consisted primi postnatal mothers. The study concluded that Women with high prep regnant body mass index have reduced the Breast milk secretion duration. Further research in interplay between body image, weight status, and breastfeeding outcomes may point to behavioral targets amenable to intervention and modification to improve breastfeeding outcomes for overweight/obese women and their Babies.

Malinee.L et al.,(2011) conducted a study to find out the effectiveness of hospital Breast milk secretion education among postpartum women in Penang Medical College, Malaysia. Sample consisted 60, in which study group consisted of 30 samples and control group consisted of 30 samples. The design was quasi experimental design. Results show that education program is effective. This breastfeeding education programme has proven to be successful in aiding postnatal

The sample size was 883 low income mothers. The study result was 88% mothers had adequate knowledge, 70%mothers had moderate knowledge. The study concluded that urban mothers had adequate knowledge about breast feeding.

Dorman.,(2009) conducted a study to find out the effect of a prenatal breastfeeding education program on the success of breastfeeding among low-income pregnant women. The sample population was of 64 postnatal mothers. Results of this study indicate that physicians are informing low income women, some of the benefits associated with breastfeeding, but are neglecting to inform them of the various ways in which breastfeeding is beneficial for both maternal and paediatric populations. The study concluded that the treatment group were more knowledgeable about breastfeeding after instruction.

Clark.,(2008) conducted a study to determine baby care providers' baby feeding knowledge, attitude and behaviour changes after viewing the baby feeding in United Kingdom. The design was showed changes in attitudes and behaviors from pre- to post test occurred primarily in the intervention group ($P < .05$). At follow-up, no significant differences were found among the 3 time periods. Baby care providers appeared to have adequate knowledge on feeding baby formula and breast milk.

Oermann.M.,(2008) conducted a study to know the effectiveness of a breastfeeding education programme on caesarean section women in Durham. The sample size was 200. The result suggests that providing education booklets, videos and telephone interview on breastfeeding prior to a caesarean delivery may contribute to breastfeeding attitude and improved rooming-in and exclusive breastfeeding rates and relevance to clinical practice. This breastfeeding education programme has proven to be successful in aiding women breastfeeding after caesarean delivery and provides care professional with an evidence based intervention.

cluster randomized trial was used. The sample size was 17046 healthy breastfeed Babies. The outcome was measured by intelligent quotient scores. The study, based on the largest randomized trial ever conducted in the area of human Breast milk secretion, provide strong evidence that prolonged and exclusive breastfeeding improves babies' cognitive development.

Williams.,(2008) conducted a descriptive study to assess the breast feeding practice among 1031 pregnant women in (NMAHP)The nursing midwifery and allied health professions Research Unit, University of Sterling, UK . The result shows that 985 (95.5%) started breastfeeding; the percentage was 73.1% (255 of 349) in the lowest-educated mothers. for 6 months, 39.3% (405 of 1031) of highest educated mothers and 15.2% (53 of 349) of lowest-educated mothers were still breastfeeding.

Agostoni.et al.,(2007) conducted a longitudinal study to assess the knowledge on health effects of complementary feeding in San Paolo Hospital, University of Milano, Milano, Italy. The sample size was 695 mothers. The result was Exclusive or full breast feeding for about 6 months in a desirable goal. Complementary feedings (i.e. solid foods and liquids other than breast milk or infant formula and follow-on formula) should not be introduced before 17 weeks and not later than 26 weeks. When a median age at start of complementary feeding was 4.5 months, while babies who had been introduced to baby formula regularly before 6 months of age were at a higher risk of receiving health problems.

Jeanne.G.et al.,(2000) conducted a case-control study related to breastfeeding and reduced risk of babyhood leukemia under contract to the Department of Health and Human Services Office on Women's Health, Washington. The sample size

STUDIES RELATED TO OTHER THERAPIES ON BREAST FEEDING

Wildan.et al.,(2015) conducted a study to determine the effect of Yoga in increasing breast milk production of mothers breast feeding babies aged 1 to 6 months in Health Polytechnic of Malang, Republic of Indonesia. The research used pre experiment method with one group pre test – post test design. Sampling used simple random sampling, and the number of samples was 30 respondents. The results of statistical assessment of t-assessment (p 0.004), meaning that there was an effect of Yoga exercises in increasing breast milk production of lactating mothers. This happens because Yoga can affect the mind, soul and spirit of the mothers, in which Yoga gives peace of mind, relaxation and a sense of comfort as well as increasing mothers' confidence, so this affects the release of prolactin and oxytocin hormones for breast milk production.

Mesh.P.et al.,(2013) conducted a quasi experimental study to evaluate the effectiveness of back massage on Breast milk secretion among immediate postnatal mothers in Philadelphia. The sample size was 220 postnatal mothers. The study result was during a music therapy session, stress related problems can be identified, addressed and often solved immediately. The observation check list was used. The study concluded Back massage was effective in improving Breast milk secretion in all parameters assessed.

Feher.S.D,et al.,(2011) conducted a study on Increasing breast milk production for premature babies with a relaxation/imagery audiotape. To facilitate the breast-feeding experience, intervention mothers were given a 20-minute audio cassette tape based on relaxation and visual imagery techniques. At a single follow-up expression of milk at the hospital approximately 1 week after enrollment, they expressed 63% more breast milk than a randomized group of control mothers. The fat content of the breast milk in the two groups was not significantly different. Among a

basis for the increased volume of expressed milk (improved milk production v more efficient milk ejection) are appropriate topics for future research.

Dorman.,(2009) conducted a study to see the effectiveness of yoga on Breast milk secretion . Quasi experimental design was used. Sample consists of 60 in which study group was 30 and control group 30. The study concluded study group mothers had adequate feeding after the intervention. The arm movements and increased blood circulation help milk production. At the very least, yoga can be very relaxing and therapeutic, which can help to facilitate milk ejection.

STUDIES RELATED TO MUSIC THERAPY ON BREAST FEEDING

Amber.A.C.et al.,(2015) conducted a study on the effect of music listening on relaxation level and volume of breast milk pumped by mothers of babies in the neonatal intensive care unit, Lexington . A total of 28 participants, who were mothers of babies in the NICU, were included in the data analysis of this study, with 14 in the control group and 14 in the study group. Participants assigned to the study group listened to relaxing music during pumping sessions in the NICU, for the duration of their baby's stay. Participants assigned to the control group pumped as they would normally without the music condition. Results indicated that there was a significant increase in relaxation scores in the music group, but no significant difference in volume of milk pumped.

Martha.N.S.et al.,(2011) conducted a Randomized Controlled Trial to evaluate the impact of music therapy on breastfeeding rates among mothers of premature newborns under University of Birmingham. In this open randomized controlled trial, mothers of premature neonates weighting ≤ 1,750 g were submitted to music therapy sessions three times a week for 60 minutes. The endpoints were

rates among mothers of premature newborns at the first follow-up visit, and also a positive influence (although not significant) that lasted up to 60 days after baby discharge. Music therapy may be useful for increasing breastfeeding rates among mothers of premature newborns.

Vianna.M.N.et al.,(2010) conducted a randomized controlled trial to evaluate the impact of music therapy on breastfeeding rates among mothers of premature newborns in Australia. In this mothers of premature neonates weighting ≤ 1,750 g were submitted to music therapy sessions three times a week for 60 minutes. The endpoints were breastfeeding rates at the moment of baby hospital discharge and at follow-up visits (7-15 days, 30 and 60 days after discharge).A total of 94 mothers (48 in the music therapy group and 46 in the comparison group) were studied. This study had a significant effect in increasing breastfeeding rates among mothers of premature newborns at the first follow-up visit, and also a positive influence (although not significant) that lasted up to 60 days after baby discharge.

Danielle.E.P.,(2010) conducted a quasi experimental study to evaluate the effectiveness of music therapy and relaxation techniques with first time mothers who were breastfeeding in United Kingdom. The randomized sampling technique was used. The sample size was 60. The results showed a statistically significant difference between the behaviour-state of the mothers during their breastfeeding attempt. The study group displayed significantly less anxiety-related behaviours and more behaviour associated with relaxation and comfort.

Punitha Mary.,(2009) conducted an experimental study to evaluate the effectiveness of music therapy on breast milk secretion among primi postnatal mothers in selected Hospital, Bangalore. The sample size was 100. Non equivalent post assessment only design and observation check list were used. Stress-related

Federal do Rio.J.,(2009) conducted a Randomized Controlled Trial to evaluate the effects of music therapy on breastfeeding rates among mothers of Premature Newborns, Brazil. A sample size of 120 (60 control group and 60 interventional group). Music therapy sessions systematically offered to all mothers in the intervention group, three times a week, not mandatory, conducted by two music therapists in an appropriate room, during 60 minutes. The study concluded that music therapy increased the production of breast milk in mothers of premature newborns.

CHAPTER III

RESEARCH METHODOLOGY

RESEARCH APPROACH:

The researcher utilized Quantitative research approach.

RESEARCH DESIGN:

Qu si experimental pre test and post test control group design was adapted for this study. A **pre test –post test control group design** is usually a quasi-experiment were participants are studied before and after the experimental manipulation.

Group	Pre test	Music Therapy	Post test
Study group	O_1	X	O_2
Control group	O_1	-	O_2

O_1 – Assess the level of breast milk secretion before music therapy

X - Music Therapy

O_2 – Assess the level of breast milk secretion after music therapy

VARIABLES

- The Independent variable for this study is Music Therapy
- The Dependent variable for this study is level of Breast milk secretion

SETTING:

The setting adopted for this study is P.P.K Hospital which is a 300 bedded Multispecialty Hospital, Marthandam, Kanya Kumari District. It is located 35 kilometers away from St. Xavier's Catholic College of Nursing, Chunkankadai. It has all facilities such as Casualty, Labour Ward, Operation Theatre, Antenatal Ward, Postnatal Ward, Post-Operative Ward and Other Specialities. The Hospital records 60 – 70 normal deliveries, 90 – 100 Lower Segmental Cesarean Section Deliveries and 5-10 instrumental deliveries per month. Totally 160 – 180 deliveries were conducted per month. This hospital is well known for its maternal and child health care.

POPULATION:

- **Target population**

  The population under study constituted all the postnatal mothers who underwent Lower Segmental Cesarean Section.

- **Accessible population**

SAMPLE:

The researcher selected postnatal mothers who underwent Lower Segmental Cesarean Section and fulfilling inclusion and exclusion criteria in P.P.K Hospital.

SAMPLE SIZE:

60 samples (30 samples in control group and 30 samples in study group).

SAMPLING TECHNIQUE

The samples were selected by using purposive sampling technique.

SAMPLING CRITERIA:

Inclusion criteria:

- Mothers who had undergone Lower Segmental Cesarean Section
- Mothers with a hospital stay minimum of 6 days.
- Both primi and multi para mothers.

Exclusion criteria:

- Mothers having hearing impairment.
- Mothers with breast abscess, breast adenoma, cracked nipple.
- Mothers with puerperal complications.
- Mothers of neonates admitted in Neonatal Intensive Care Unit.

DESCRIPTION OF TOOL:

The tool used in the study consists of 2 parts.
Part 1: Demographic data (Annexure VII)

The Demographic variables consist of Age, education, Occupation, type of food, Religion and parity.

Part 2: Modified Christi Breastfeeding Assessment Tool (Annexure VII)

The tool consists of five criteria on level of breast milk secretion such as Latch-On, Length of time before latch-on, suckling, audible swallowing and mother's evaluation and consists of three observed assessment including inadequate, moderate, adequate. Each assessment was observed and evaluated based on the score.

Scoring procedure for level of Breast milk secretion:

0 - 2: Inadequate
3 - 6: Moderate
7 – 10: Adequate

DESCRIPTION OF INTERVENTION

Step I:

Sampling done based on the inclusion criteria. An informed consent got from postnatal mothers who had participated in this study. Demographic data (Annexure VII) was collected. Pre assessment done by Modified Christi breastfeeding assessment tool (Annexure VII)

Step II:

for the mother and music therapy was provided in morning for 30 minutes every day for a period of 6 days from the day of delivery.

Step III:

Post assessment was done by Modified Christi breastfeeding assessment tool.

Step IV:

Data was collected, analyzed and tabulated by using descriptive and inferential statistics.

CONTENT VALIDITY

For content validity five experts - three experts from the department of Obstetrics and Gynaecological nursing and two from senior doctors of obstetrics and gynaecological department were requested to give their opinion about the content and its relevance appropriateness of the items. Expert for music therapy was requested for opinion and obtained consent to use Instrumental music of Anandhabairavi Ragam (Annexure VI) for the study. The tool was modified based on suggestions.

RELIABILITY

Inter rater reliability assessment was done. The ‘r’ value was 0.85 for the Modified Christi Breast Feeding assessment tool (Annexure VII), which concluded that the tool was reliable.

The researcher obtained permission from the Principal, St.Xavier's Catholic College of Nursing and the Director of Caroline John Hospital to conduct the pilot study. Oral consent was obtained from six samples, in that three in study group and three in control group. Study group received Music Therapy (Annexure VI) and control group did not receive Music Therapy. The intervention was given in the morning for 30 minutes for 6 days from the day of delivery. Then the post assessment was conducted on all the 6 days with Christi Breastfeeding Assessment Tool (Annexure VII) and the mean value was taken. Analysis of the data was done by using descriptive and inferential statistics. No changes were made and the researcher proceeded to the main study.

METHOD OF DATA COLLECTION

Phase 1 Selection of postnatal mothers

After obtaining formal permission from the Principal of St. Xavier's Catholic College of Nursing, Chunkankadai (Annexure I) and Mr. Mathivanan MBA, Administrator, P.P.K. Hospital, Marthandam (Annexure II), the participants were selected based on the inclusion and exclusion criteria. The researcher obtained oral consent from each samples and proceeded with the data collection.

Phase 2 Pre assessing of postnatal mothers

The data was collected from the selected participants and the Modified Christi breast feeding assessment tool (Annexure VII) was used to assess the level of breast milk secretion. Averages of 2-3 samples per day were selected for the study group and control group.

Study group received Music Therapy and control group did not receive Music Therapy. The intervention was given in the morning for 30 minutes for 6 days from the day of delivery.

Phase 4 Post assessment

The post assessment was conducted on all the 6 days with Christi Breastfeeding Assessment Tool (Annexure VII) and Mean value was taken. Analysis of the data was done by using descriptive and inferential statistics. (Annexure XII).

PLAN FOR DATA ANALYSIS

Data collected were analyzed by using both descriptive and inferential statistics such as mean, standard deviation, chi square, and paired and unpaired't' assessment. (Annexure XII)

Descriptive statistics

- Frequency and percentage distribution was used to analyze the demographic variables.

- Mean and standard deviation was used to assess the effectiveness of Music therapy on level of breast milk secretion among postnatal mothers.

Inferential statistics

- ✓ Paired't' test was used to compare post assessment level of breast milk secretion on control group and study group.

- ✓ Chi-square test was used to find out the association of post assessment level of breast milk secretion in study group and control group with the selected demographic variables.

ETHICAL CONSIDERATION

The proposed study was conducted after the approval of the dissertation committee of St. Xavier's Catholic College of Nursing. Permission was obtained from Mr.Mathivanan, MBA, Administrator, P.P.K. Hospital Marthandam (Annexure II). Oral consent was obtained from each samples before starting the data collection. Assurance was given to the study samples regarding the confidentiality of the data collected.

CHAPTER IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analysis and interpretation of the data collected among postnatal mothers who underwent lower segmental caesarean section. This chapter also represents the findings of the study. The data collected from the samples were tabulated, analyzed and preserved in the tables and interpreted under the following sections based on the objectives and hypotheses of the study.

This chapter is divided into four sections.

Section A:

1. Distribution of demographic variables of postnatal mothers in study group and control group.

Section B:

2. Pre and post assessment on level of breast milk secretion in study and control group:

2.1 Pre assessment frequency and percentage distribution on level of breast milk secretion of postnatal mothers in study group and control group.

2.2 Post assessment frequency and percentage distribution on level of breast milk secretion of postnatal mothers in study group and control group.

Section C:

3. Comparison of pre and post assessment on level of breast milk secretion among postnatal mothers

3.1 Comparison of pre assessment and post assessment level of breast milk secretion among postnatal mothers in study group and control group.

3.2 Comparison of post assessment level of breast milk secretion among postnatal mothers in study group and control group.

3.3 Comparison of pre and post assessment level of breast milk secretion among postnatal mothers in study group and control group.

Section D:

4. Association between the post assessment level of breast milk secretion with the selected demographic variables in study and control group

4.1 Association between the post assessment level of breast milk secretion among postnatal mothers in study group with the selected demographic variables.

4.2 Association between the post assessment level of breast milk secretion among postnatal mothers in control group with the selected demographic variables**.**

SECTION: A

DISTRIBUTION OF DEMOGRAPHIC VARIABLES OF POSTNATAL MOTHERS IN STUDY GROUP AND CONTROL GROUP. (ANNEXURE VIII)

Table 1 Frequency and percentage distribution of demographic variables of postnatal mothers in study group and control group

N = 60

S.No.	Demographic Variables	Study Group n = 30		Control Group n = 30	
		f	%	f	%
1	Age				
	a) 18-23years	10	33.33	6	20
	b) 24-28years	12	40	16	53.33
	c) 29-33years	8	26.67	8	26.67
	c) 34-40	0	0	0	0
2	Educational status				
	a) Illiterate	0	0	0	0
	b) School education	7	23.33	5	16.67
	c) Under Graduate	17	56.67	18	60
	d) Post Graduate	6	20	7	23.33
3	Occupation				
	a) Unemployed				

4	Religion a) Hindu b) Christian c) Muslim	13 15 2	43.33 50 6.67	13 15 2	43.33 50 6.67
5	Type of Food a) Vegetarian b) Non-Vegetarian	0 30	0 100	0 30	0 100
6	Parity a) Primi para b) Multi para c) Grand multi para	16 8 6	53.33 26.67 20	16 11 3	53.33 36.67 10

Table.1. represents the frequency and percentage distribution of the demographic variables among postnatal mothers in study group and control group . According to the age 10 (33.33%) belong to age group of 18-23years, 12 (40%) belongs to age group of 24-28years, 8 (26.67 %) belong to age group of 29-33years and none belong to age group of 34-40 years in study group. In control group 6 (20.%) belong to age group of 18-23years, 16 (53.33%) belong to age group of 24-28years, 8 (26.67%) belong to age group of 29-33years and none belong to the age group of 34-40.

Regarding to educational status, none were illiterates, 7 (23.33%) were in school education, 17 (56.67%) were under graduate and 6 (20%) were post graduate. Likewise in control group none were illiterate, 5 (16.67%) were school education, 18 (60%) were under graduate and 7 (23.33%) were post graduate.

Analyzing to Occupation 10(33.34%) were unemployed, 4 (13.33%) were self employed , 4 (13.33%) were government employed and 12 (40%) were

With regard to Religion 13 (43.33%) were Hindu, 15 (50%) were Christian and 2 (6.67%) were muslims in study group. Likewise in control group 13 (43.33%) were Hindu, 15 (50%) were Christians and 2 (6.67%) were muslims.

With regard to Type of food, none were vegetarian and 30 (100%) were non-vegetarian. Likewise in control group none were vegetarian and 30 (100%) were non- vegetarian.

With regard to Parity, 16 (53.33%) were primi para, 8 (26.67%) were multi para and 6 (20%) were grand multi para. In control group 16 (53.33%) were primi para, 11 (36.67%) were multi para and 3 (10%) were grand multi para.

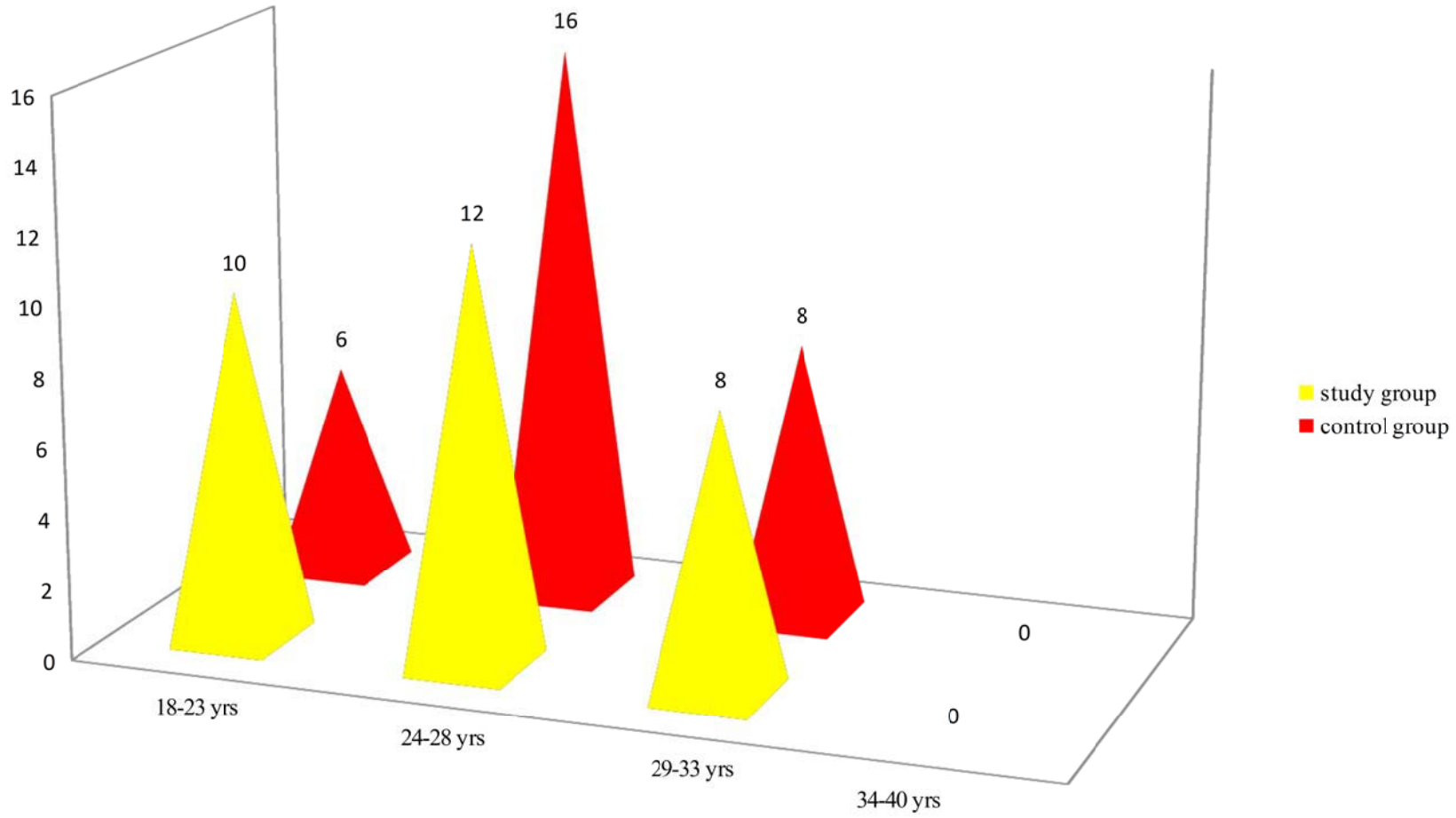

Fig-2.1: Percentage distribution of Age among Postnatal mothers

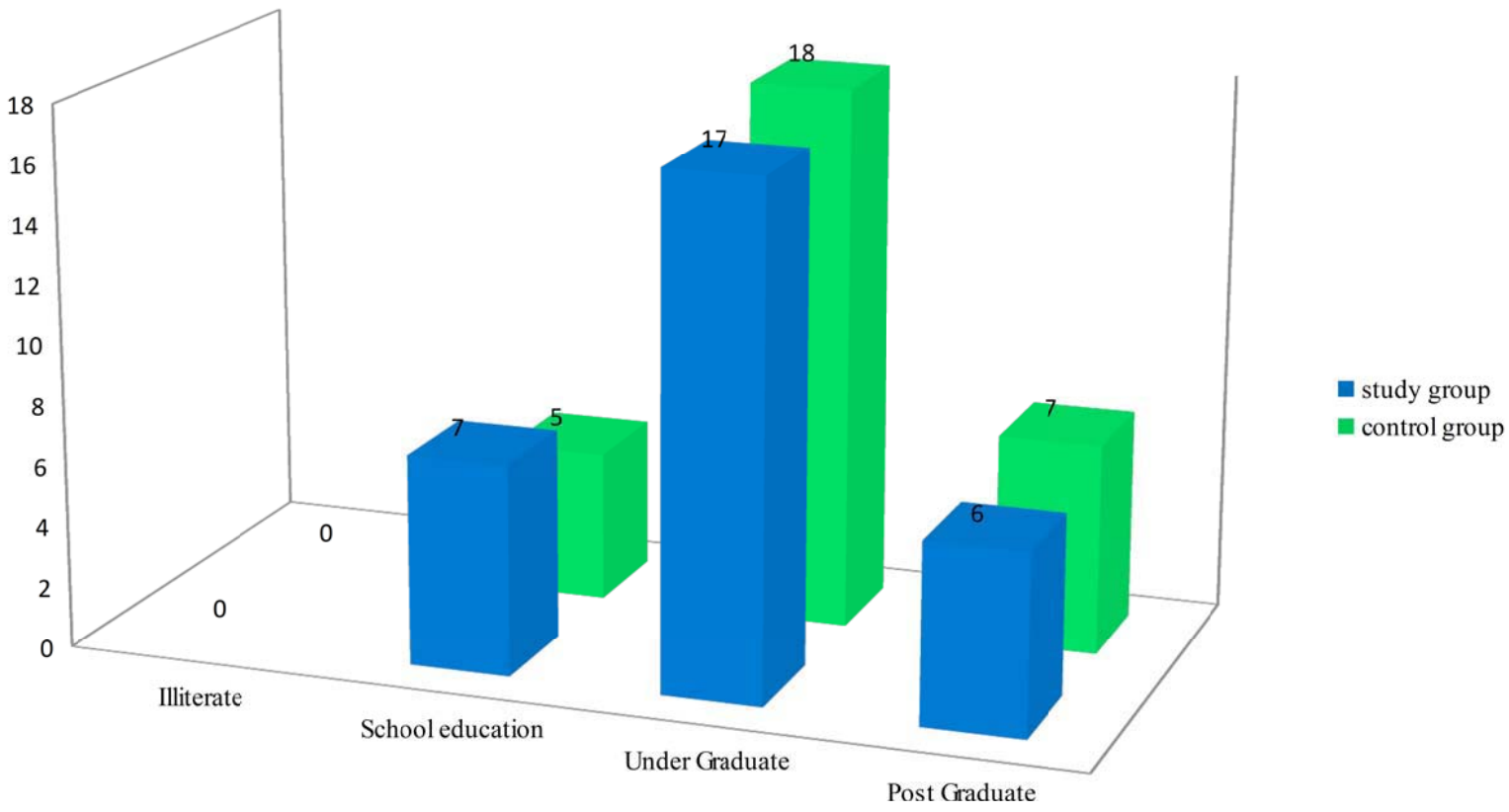

Fig-2.2: Percentage distribution of Education status among Postnatal mothers

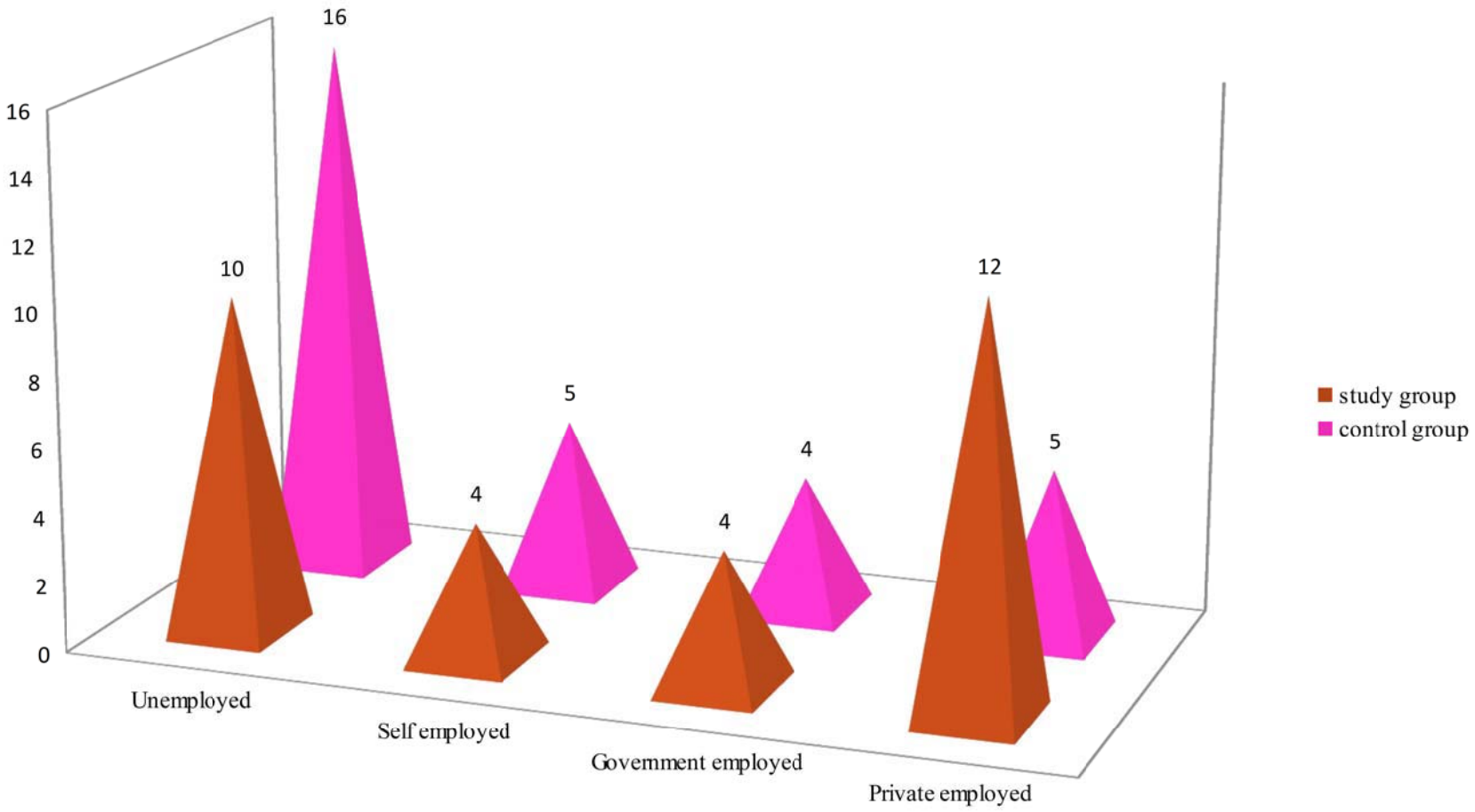

Fig-2.3: Percentage distribution of Occupation among Postnatal mothers

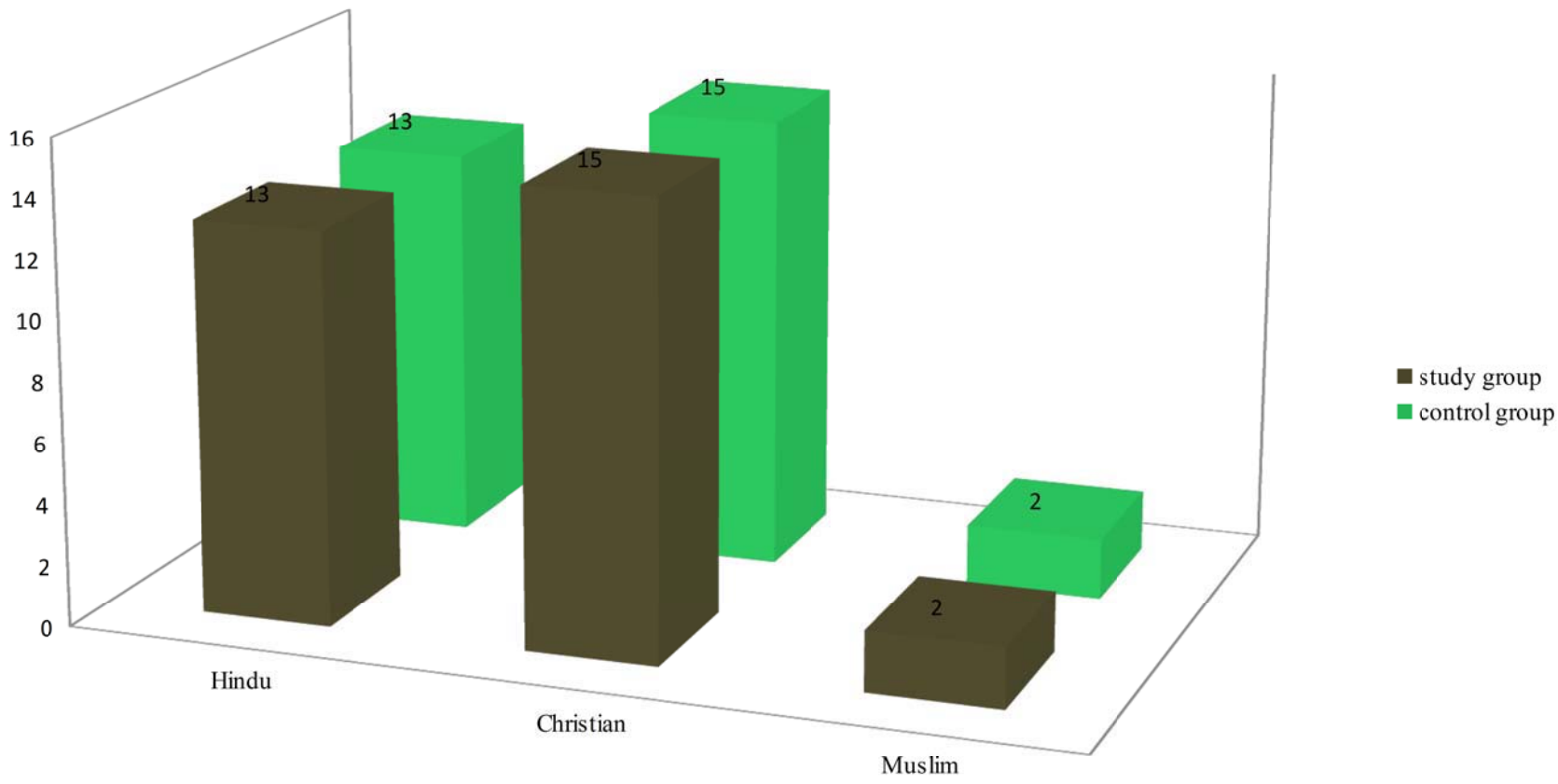

Fig-2.4: Percentage distribution of Religion among Postnatal mothers

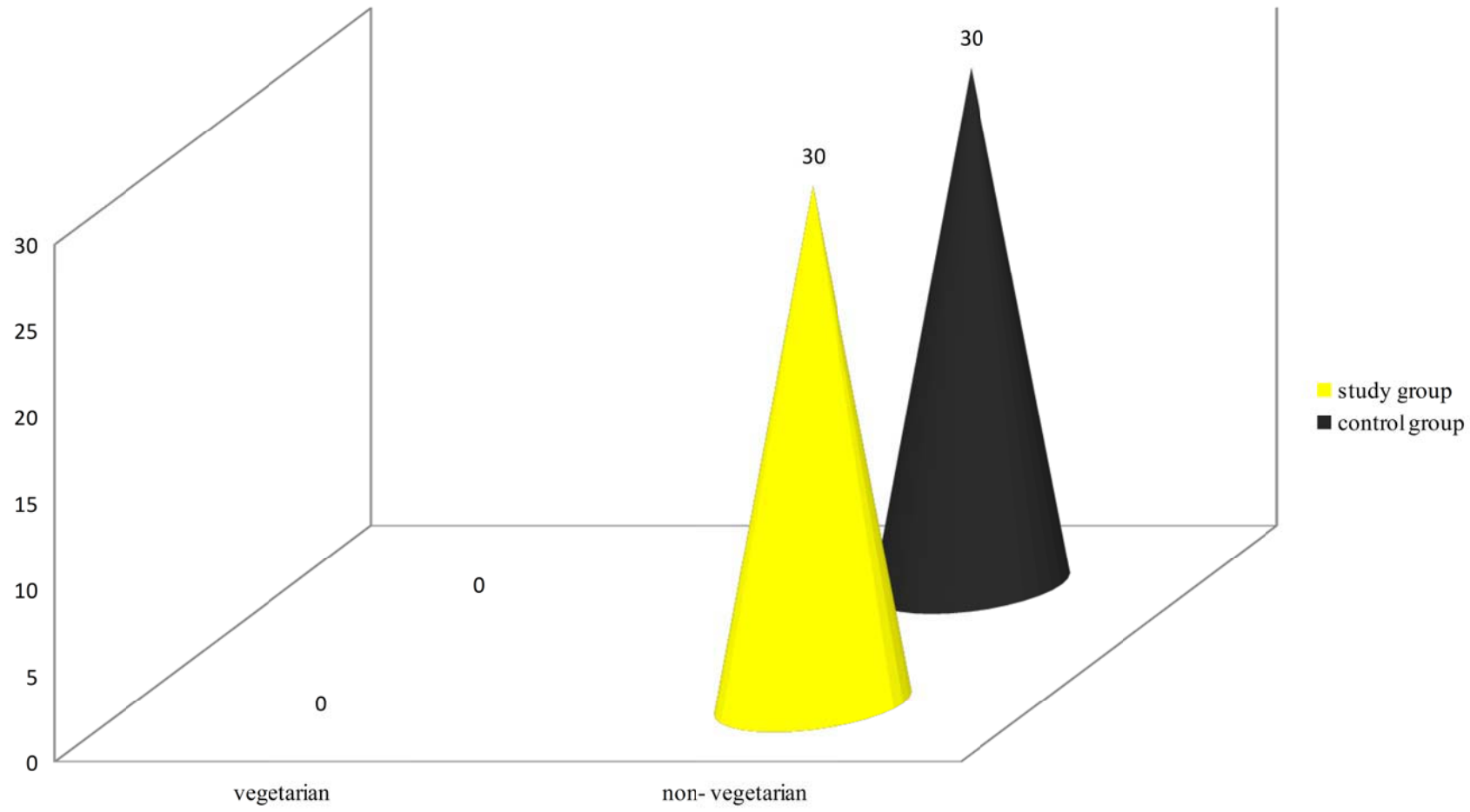

Fig-2.5: Percentage distribution of Type of food among Postnatal mothers

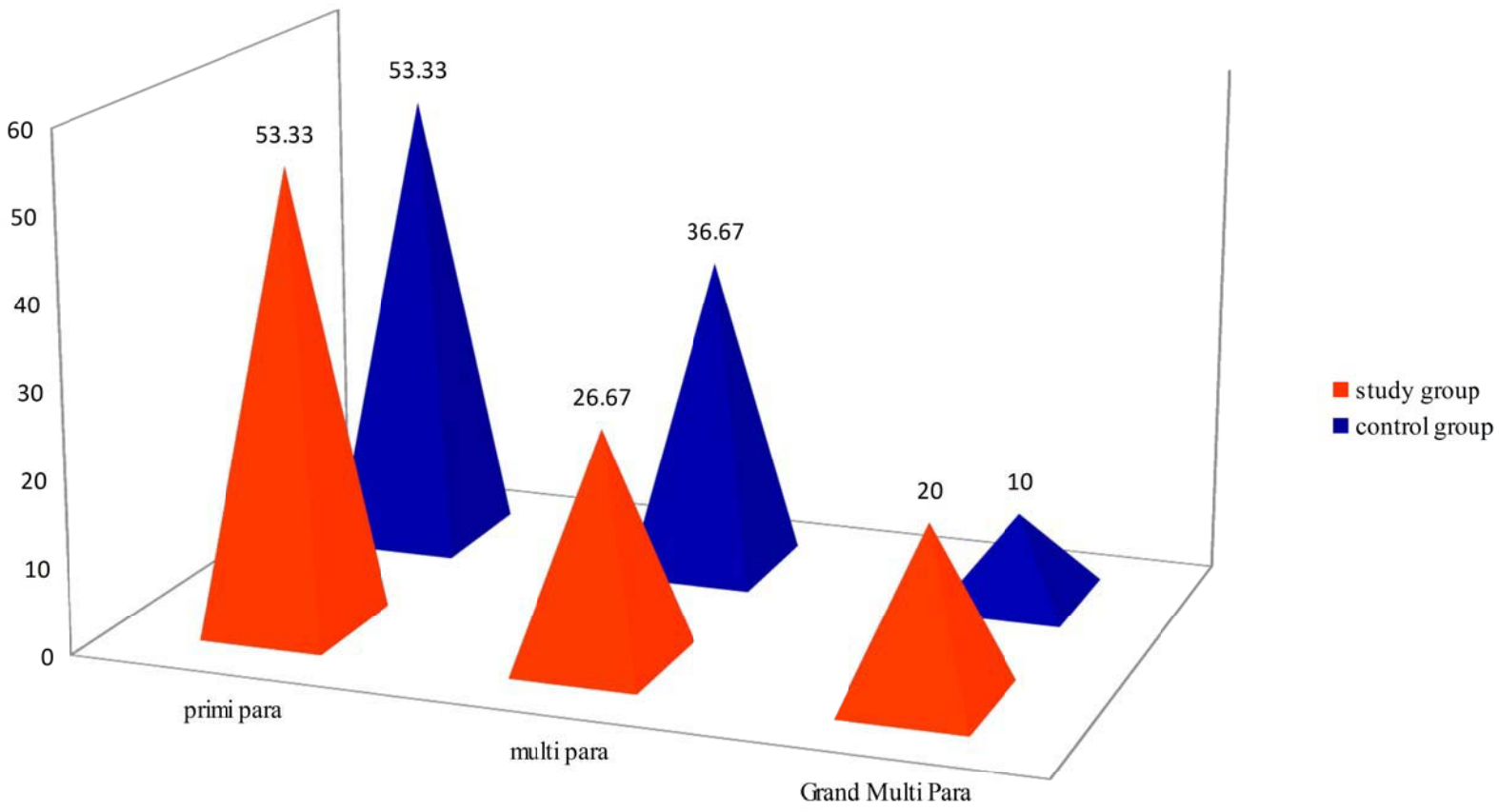

Fig-2.6: Percentage distribution of Parity among Postnatal mothers

Section-B

PRE AND POST ASSESSMENT ON LEVEL OF BREAST MILK SECRETION IN STUDY AND CONTROL GROUP

Table 2.1 Pre assessment Frequency and percentage distribution on level of breast milk secretion of postnatal mothers in study group and control group.

N=60

PRE ASSESSMENT													
S.No	**Level of Breast milk secretion**	**Study group n = 30**						**Control group n= 30**					
		Inadequate		**Moderate**		**Adequate**		**Inadequate**		**Moderate**		**Adequate**	
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1	**Latch – On**	12	40	18	60	0	0	10	33.33	20	66.67	0	0
2	**Length of time before latch-on and suckling**	16	53.33	14	46.67	0	0	12	40	18	60	0	0
3	**Suckling**	9	30	21	70	0	0	15	50	15	50	0	0
4	**Audible swallowing**	19	63.33	11	36.67	0	0	18	60	12	40	0	0
5	**Mother's evaluation**	19	63.33	11	36.67	0	0	21	70	9	30	0	0
	Level of Breast milk secretion	18	60	12	40	0	0	17	56.67	13	43.33	0	0

Table 2.1 represents that in study group, according to Latch-on 12(40%) had inadequate, 18 (60%) had moderate and none of them had adequate breast milk secretion. With regarding to Length of time before latch on and suckling 16(53.33%) had inadequate, 14 (46.67%) had moderate and none had adequate level of breast milk secretion. Considering to suckling , 9 (30%) had inadequate , 21 (70%) moderate and none of them had adequate secretion. With relevance to audible swallowing, 19 (63.33%) had inadequate, 11 (36.67%) had moderate and none had adequate breast milk secretion. Analysing the mothers evaluation, 19 (63.33%) had inadequate, 11 (36.67%) had moderate and none had adequate breast milk secretion .

In control group, according to Latch-on 10(33.33%) had inadequate, 20(66.67%) had moderate and none of them had adequate breast milk secretion. With regarding to Length of time before latch on and suckling 12(40%) had inadequate, 18(60%) had moderate and none had adequate level of breast milk secretion. Considering to suckling , 15 (50%) had inadequate , 15 (50%) moderate and none of them had adequate secretion. Analysing audible swallowing, 18 (60%) had inadequate, 12 (40%) had moderate and none had adequate breast milk secretion. With relevance to mothers evaluation, 21 (70%) had inadequate, 9 (30%) had moderate and none had adequate breast milk secretion.

The Overall frequency and percentage distribution of level of breast milk secretion of postnatal mothers during pre assessment, in study group 18 (60%) had inadequate breast milk secretion, 12 (40%) had moderate breast milk secretion and none had adequate breast milk secretion but in control group 17 (56.67%) had inadequate breast milk secretion, 13 (43.33%) had moderate breast milk secretion and none had adequate breast milk secretion..

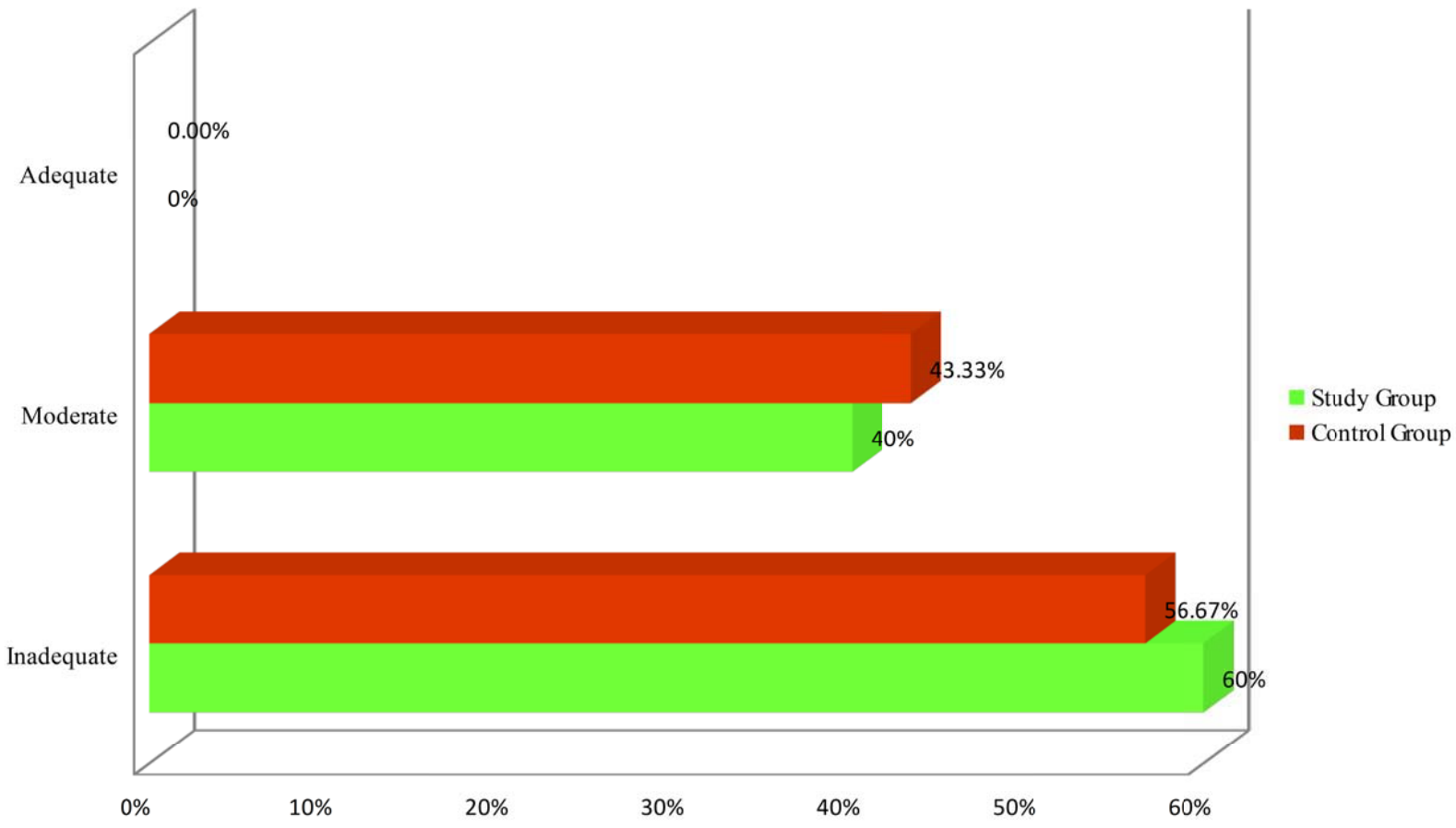

Fig2.7: Percentage distribution of pre assessment level of breast milk secretion among postnatal mothers

2.2 Post assessment frequency and percentage distribution on level of breast milk secretion of postnatal mothers in study group and control group.

N= 60

POST ASSESSMENT													
S.No	**Level of Breast milk secretion**	**Study group n = 30**						**Control group n= 30**					
		Inadequate		**Moderate**		**Adequate**		**Inadequate**		**Moderate**		**Adequate**	
		f	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**
1	**Latch – On**	0	0	0	0	30	100	0	0	10	33.33	20	66.67
2	**Length of time before latch-on and suckling**	0	0	0	0	30	100	0	0	8	26.67	22	73.33
3	**Suckling**	0	0	0	0	30	100	0	0	6	20	24	80
4	**Audible swallowing**	0	0	0	0	30	100	0	0	6	20	24	80
5	**Mother's evaluation**	0	0	0	0	30	100	0	0	7	23.33	23	76.67
	Level of Breast	0	0	9	30	21	70	0	0	15	50	15	50

Table 2.2represents that in study group, according to Latch-on none had inadequate, none had moderate and 30(100%) had adequate breast milk secretion. With regarding to Length of time before latch on and suckling none had inadequate, none had moderate and none 30(100%) had adequate level of breast milk secretion. Considering to suckling, none had inadequate, none had moderate and 30(100%) had adequate secretion. With relevance to audible swallowing, none had inadequate, none had moderate and none30(100%) had adequate breast milk secretion. With relevance to mothers evaluation, none had inadequate, none had moderate and 30(100%) had adequate breast milk secretion.

In control group, According to Latch-on none had inadequate, 10 (33.33%) had moderate and 20(66.67%) had adequate breast milk secretion. Analyzing Length of time before latch on and suckling none had inadequate, 8 (26.67%) had moderate and 22 (73.33%) had adequate level of breast milk secretion. With regarding to suckling, none had inadequate, 6 (20%) had moderate and 24 (80%) had adequate secretion. Considering to audible swallowing, none had inadequate, 6 (20%) had moderate and 23 (76.67) had adequate breast milk secretion. With relevance to mothers evaluation, none had inadequate, none had moderate and 30(100%) had adequate breast milk secretion.

The overall frequency and percentage distribution on level of milk secretion of postnatal mothers during post assessment, in study group none of them had inadequate breast milk secretion, 9 (30%)of them had moderate breast milk secretion and 21 (70%) had adequate breast milk secretion. In control group none o f them had inadequate breast milk secretion, 15 (50%) had moderate breast milk secretion and 15 (50 %) had adequate breast milk secretion.

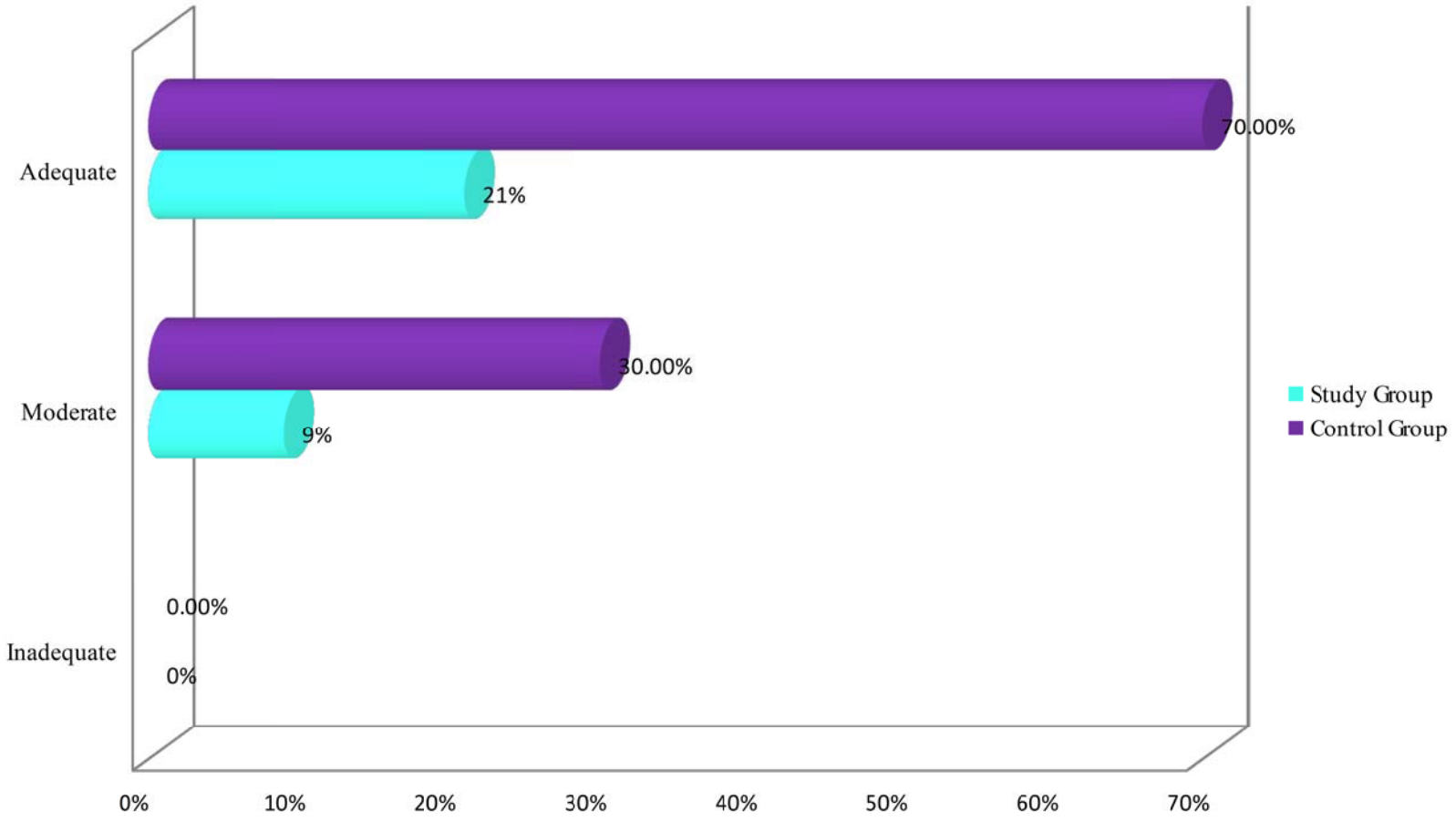

Fig 2.8: Percentage distribution of post assessment level of breast milk secretion among postnatal mothers.

SECTION C

COMPARISON OF PRE ASSESSMENT AND POST ASSESSMENT LEVEL OF BREAST MILK SECRETION AMONG POSTNATAL MOTHERS IN STUDY GROUP AND CONTROL GROUP

TABLE 3.1 Comparison of mean, standard deviation and independent 't' value on pre and post assessment level of breast milk secretion among postnatal mothers in study group and control group.

N=60

Variables	Group	Mean	SD	Unpaired 't' value
Level of Breast milk secretion	Control group (n=30) Pre assessment Post assessment	 2.47 5.90	 2.05 0.86	11.16
	Study group (n=30) Pre assessment Post assessment	 2.43 7.34	 1.79 0.54	17.25*

*significant at $p<0.05$.

Table 3.1 represents the comparison of mean, standard deviation and independent't' value on pre and post assessment level of milk secretion among postnatal mothers in study group and control group. The mean score on level of milk secretion among postnatal mothers in study group was 2.43 in pre assessment and 7.34 in post

mothers was 2.47 in pre assessment and5.90 in post assessment respectively. The estimated paired 't' value for Breast milk secretion was 11.16 which was also significant at $p < 0.05$ due to normal physiology of breast milk secretion. But comparing both the values, the music therapy was more significant.

Table 3.2 Comparison of mean, standard deviation and paired 't' value on post assessment level of breast milk secretion among postnatal mothers in study group and control group

N=60

Variables	Group	Mean	SD	Paired 't' test
Level of Breast Milk Secretion	Study group n=30	7.34	0.86	4.91*
	Control group n=30	5.90	0.54	

*significant at p<0.05.

Table 3.2 represents the comparison of mean, standard deviation and paired 't' value on post assessment level of breast milk secretion among postnatal mothers in study group and control group. The mean score on level of milk secretion among postnatal mothers study group was 7.34 and in control group was 5.90. The estimated paired "t" value was 4.91 which is significant at p<0.05. It shows that Music Therapy was effective and improved the level of milk secretion. Hence the research hypothesis (H_2) is accepted.

o	milk secretion	n = 30			n = 30		
		Mean	Standard deviation	't' value	Mean	Standard deviation	't' value
1	Latch – On	0.9	1.75	2.9**	0.21	0.69	1.66
2	Length of time before latch- on and suckling	1	2.03	2.7*	0.59	1.28	2.56*
3	Suckling	0.76	1.66	2.53*	0.7	1.41	2.8*
4	Audible swallowing	1.13	2.31	2.69*	0.74	1.59	2.55*
5	Mother's Evaluation	1.14	1.14	2.71*	0.85	1.93	2.42*
	Overall	4.84	9.91	2.67|*	3.4	7.18	2.59*

*significant at $p<0.05$, **significant at $p<0.01$.

Table 3.3 represents the comparison of music therapy according to level of breast milk secretion among postnatal mothers in study group and control group, In study group the mean value of Latch- on is 0.9, standard deviation is 1.75 and 't' value is 2.9. Which is significant at $p<0.05$, the mean value of length of time before latch-on is 1, standard deviation is 2.03 and 't' value is 2.7. Which is significant at $p<0.05$, the mean value of suckling is 0.76, standard deviation is 1.66 and 't' value is 2.53. Which is significant at $p<0.05$, the mean value of audible swallowing is 1.13, standard

In Control group , the mean value of Latch- on is 0.21, standard deviation is 0.69 and ‘t’ value is 1.66, the mean value of length of time before latch-on is 0.59, standard deviation is 1.28 and ‘t’ value is 2.56. Which is significant at $p<0.05$, the mean value of suckling is 0.7, standard deviation is 1.41 and ‘t’ value is 2.8. Which is significant at $p<0.05$, the mean value of audible swallowing is 0.74, standard deviation is 1.59 and ‘t’ value is 2.55. Which is significant at $p<0.05$, the mean value of mother’s evaluation is 0.85, standard deviation is 1.93 and ‘t’ value is 2.42. Which is significant at $p<0.05$.

SECTION D

ASSOCIATION BETWEEN THE POST ASSESSMENT LEVEL OF BREAST MILK SECRETION AMONG POSTNATAL MOTHERS IN STUDY GROUP AND CONTROL GROUP WITH THE SELECTED DEMOGRAPHIC VARIABLES

Table 4.1 Association between the post assessment level of breast milk secretion among postnatal mothers in study group with the selected demographic variables

n=30

STUDY GROUP									
S.No	**Demographic Variables**		**Inadequate**		**Moderate**		**Adequate**		**Chi-square test**
			f	**%**	**f**	**%**	**f**	**%**	
1	**Age**	**18 – 23 yrs**	2	6.67	3	10	2	6.67	χ^2 = **1.65**
		24-28 yrs	3	10	4	13.33	6	20	**df = 2**
		29-33 yrs	3	10	3	10	4	13.33	**Table value = 5.99**
		34-40 yrs	0	0	0	0	0	0	
2	**Education**	**Illitrate**	0	0	0	0	0	0	χ^2 = **0.86**
		School Education	1	3.33	0	0	4	13.33	**df = 2**

3	**Occupation**	**Unemployed**	4	13.33	4	13.33	7	23.33	**χ^2 = 1.143** **df = 3** **Table value = 7.82**
		Self Employed	1	3.33	2	6.67	2	6.67	
		Government Employed	0	0	1	3.33	2	6.67	
		Private Employed	1	3.33	3	10	6	20	
4	**Religion**	**Hindu**	0	0	5	16.67	1	3.33	**χ^2 = 3.34** **df = 2** **Table value = 5.99**
		Christian	1	3.33	4	13.33	1	3.33	
		Muslim	1	3.33	1	3.33	0	0	
5	**Type of food**	**Vegetarian**	0	0	0	0	0	0	**χ^2 = 0** **df = 0** **Table value = 0**
		Non-Vegetarian	5	16.67	12	40	13	43.33	
6	**Parity**	**Primi Para**	4	13.33	12	40	2	6.67	**χ^2 = 3.63** **df = 2** **Table value = 5.99**
		Multi Para	2	6.67	6	20	2	6.67	
		Grand Multi Para	0	0	2	6.67	4	13.33	

Table 4.1 represents that in study group the calculated value of the selected

Table 4.2Association between the post assessment level of breast milk secretion among postnatal mothers in control group with the selected demographic variables.

n = 30

CONTROL GROUP									
S.No	**Demographic Variables**		**Inadequate**		**Moderate**		**Adequate**		**Chi-square test**
			f	**%**	**f**	**%**	**f**	**%**	
1	**Age**	**18 – 23 yrs**	4	13.33	2	6.67	3	10	**χ^2 = 2.16** **df = 2** **Table value = 5.99**
		24-28 yrs	12	40	4	13.33	4	13.33	
		29-33 yrs	2	6.67	4	13.33	1	3.33	
		34-40 yrs	0	0	0	0	0	0	
2	**Education**	**Illitrate**	0	0	0	0	0	0	**χ^2 = 0.86** **df = 2** **Table value = 5.99**
		School Education	2	6.67	5	16.67	0	0	
		Under Graduate	3	10	8	26.66	4	13.33	
		Post Graduate	1	3.33	4	13.33	3	10	
3	**Occupation**	**Unemployed**	3	10	4	13.33	6	20	**χ^2 = 2.40** **df = 3**
		Self	0	0	2	6.67	4	13.3	

		Employed				3			
4	**Religion**	**Hindu**	2	6.67	7	23.33	1	3.33	**χ^2 = 0.14** **df = 2** **Table value = 5.99**
		Christian	2	6.67	7	23.33	1	3.33	
		Muslim	1	3.33	1	3.33	0	0	
5	**Type of food**	**Vegetarian**	0	0	0	0	0	0	**χ^2 = 0** **df = 0** **Table value = 0**
		Non-Vegetarian	6	20	18	60	6	20	
6	**Parity**	**Primi Para**	4	13.33	9	30	3	10	**χ^2 = 2.15** **df = 2.15** **Table value = 5.99**
		Multi Para	0	0	6	20	5	16.67	
		Grand Multi Para	0	0	1	3.33	2	6.67	

Table 4.2 represents that in control group the calculated value of the selected demographic variables such as age, education, occupation, religion, type of food and parity is lesser than the table value which indicates that there is no significant association with level of breast milk secretion and demographic variables . Hence the research hypothesis (H_3) is not accepted.

CHAPTER V

DISCUSSION

This chapter deals with the discussion of the data analyzed based on the objectives and hypotheses of the study. Quasi experimental study was used to evaluate the effectiveness of Music therapy on level of breast milk secretion among postnatal mothers in selected hospital, Kanya Kumari district. The discussion was based on the objectives and hypotheses mentioned in the study.

Distribution of demographic variables of postnatal mothers in study group and control group.

The distribution of demographic variables of postnatal mothers in study group and control group of which 30 postnatal mothers were in study group and 30 postnatal mothers were in control group. According to the age 10 (33.33%) belong to age group of 18-23years, 12 (40%) belong to age group of 24-28years in study group. In control group 16 (53.33%) belong to age group of 24-28years, 8 (26.67%) belong to age group of 29-33years .

With regard to educational status, 17 (56.67%) were under graduate and 6 (20%) were post graduate. In control group 18 (60%) were under graduate and 7 (23.33%) were post graduate.

Regarding the Occupation 10(33.34%) were unemployed, 12 (40%) were private employed. Likewise in control group 16 (53.30%) were unemployed, 5 (16.67%) were self employed.

Analyzing the Type of food, none were vegetarian and 30 (100%) were non-vegetarian. Likewise in control group none were vegetarian and 30 (100%) were non- vegetarian.

With regard to Parity, 16 (53.33%) were primi para, and 6 (20%) were grand multi para. In control group 16 (53.33%) were primi para, 11 (36.67%) were multi para and 3 (10%) grand multi para.

The first objective was to assess and compare the pre and post assessment level of breast milk secretion among postnatal mothers in study and control group

During pre assessment, in study group 18(60%) had inadequate milk secretion, 12 (40%) had moderate milk secretion and none had adequate milk secretion but in control group 17 (56.67%) had inadequate milk secretion, 13(43.33%) had moderate milk secretion and none had adequate milk secretion..

During post assessment, in study group none of them had inadequate Breast milk secretion, 9 (30%)of them had moderate Breast milk secretion and 21 (70%) had adequate Breast milk secretion. In control group none had inadequate Breast milk secretion, 15 (50%) had moderate Breast milk secretion and 15 (50 %) had adequate Breast milk secretion.

The first objective was supported by the study of **Federal do Rio J (2009) conducted** a Randomized Controlled Trial to evaluate the effects of music therapy on Breastfeeding Rates among mothers of Premature Newborns in Brazil. A sample size of 120 (60 control group and 60 interventional group) were selected.. Music therapy sessions systematically offered to all mothers in the intervention group, three times a week, not mandatory, conducted by two music therapists in an appropriate room

The second objective was to evaluate the effectiveness of Music Therapy on level of breast milk secretion among postnatal mothers

The mean score on level of milk secretion among postnatal mothers in study group was 2.43 in pre assessment and 7.34 in post assessment respectively. The independent't' value of 17.25 which is significant at $p < 0.05$. It shows that Music Therapy was effective in improving the level of Milk secretion.

In Control group the mean score on level of breast milk secretion among postnatal mothers was 2.47 in pre assessment and 5.90 in post assessment respectively. The estimated independent 't' value for breast milk secretion was 11.16 which was also significant at $p < 0.05$ due to normal physiology of breast milk secretion. But comparing both the values the music therapy was more significant. Hence the research hypothesis (H_1) is accepted.

The mean score on level of milk secretion among postnatal mothers study group was 7.34 and in control group was 5.90. The estimated paired "t" value of 4.91 which is significant at $p<0.05$. It shows that Music Therapy was effective and improved the level of milk secretion. Hence the research hypothesis (H_2) is accepted.

The second objective was supported by the study of **Martha N. S.et al (2011)** conducted a Randomized Controlled Trial. To evaluate the impact of music therapy on breastfeeding rates among mothers of premature newborns. In this mothers of premature neonates weighting ≤ 1,750 g were submitted to music therapy sessions three times a week for 60 minutes. Music therapy had a significant effect in increasing breastfeeding rates among mothers of premature newborns at the first follow-up visit, and also a positive influence (although not significant) that lasted up to 60 days after baby discharge.

It shows that, in Study group and in control group the calculated value of demographic variables such as age, education, occupation, religion, type of food and parity is lesser than the table value which indicates that there is no significant association with breast milk secretion and demographic variables. Hence hypothesis (H_3) is not accepted.

This chapter deals with the discussion of the study with reference to the objective and supportive studies. Among the three objectives and hypotheses, two objectives have been obtained and two hypotheses were accepted in this study.

CHAPTER VI

SUMMARY, CONCLUSION, LIMITATIONS, NURSING IMPLICATIONS, RECOMMENDATIONS

This chapter deals with the summary of the study and conclusion. It clarifies nursing implications for nursing practice, limitations and recommendations for further research in the field.

SUMMARY

The aim of the study is to assess the effectiveness of music therapy on level of breast milk secretion among postnatal mothers. A review of related literature enabled the researcher to develop the conceptual framework and methodology for the study. The conceptual framework adopted for this study was based on Einstein Widenbach's Prescriptive Helping Art of clinical Nursing Theory(1964) . Quantitative research approach was used. Quasi Experimental pretest - post test Control group design was adopted to evaluate the effectiveness of music therapy on level of breast milk secretion among postnatal mothers. The study was conducted in PPK hospital. The purposive sampling technique was used to select 30 samples for Control group and 30 samples for study group.

Data collection was done by using the Modified Christi breastfeeding assessment tool. Music therapy was administered for study group. Post assessment was done for 6 days from the date of delivery after every schedule of music therapy administration. The data gathered were analyzed by descriptive and inferential statistical method and interpretation were done on the basis of the objectives of the study. The level of significance was assessed by $p<0.05$ to test the hypothesis.

FINDINGS

The major finding of the study was summarized as follows,

The distribution of demographic variables of postnatal mothers in study group of 30 postnatal mothers and control group of 30 postnatal mothers, according to the age 10 (33.33%) belong to age group of 18-23years and 12 (40%) belong to age group of 24-28years. In control group, 16 (53.33%) belong to age group of 24-28years, and 8 (26.67%) belong to age group of 29-33years.

Regarding to educational status, 7 (23.33%) were school education, 17 (56.67%) were under graduate, Likewise in control group 5 (16.67%) were school education, 18 (60%) were under graduate and 7 (23.33%) were post graduate.

With regard to Occupation 10(33.34%) were unemployed, and 12 (40%) were private employed. Likewise in control group 16 (53.30%) were unemployed,5 (16.67%) were self employed and 5 (16.67%) were private employed.

Considering the Religion 13 (43.33%) were Hindu, 15 (50%) were Christian and 2 (6.67%) were Muslims in study group. Likewise in control group 13 (43.33%) were Hindu, 15 (50%) were Christians and 2 (6.67%) were Muslims.

Analyzing the type of food, 30 (100%) were non-vegetarian. Likewise in control group 30 (100%) were non- vegetarian.

With regard to Parity, 16 (53.33%) were primi para, 8 (26.67%) were multi para and 6 (20%) were grand multi para. In control group 16 (53.33%) were primi para, 11 (36.67%) were multi para and 3 (10%) were grand multi para.

breast milk secretion. During post assessment, in study group none of them had inadequate breast milk secretion, 9 (30%) of them had moderate breast milk secretion and 21 (70%) had adequate breast milk secretion. In control group none had inadequate breast milk secretion, 15 (50%) had moderate Breast milk secretion and 15 (50 %) had adequate Breast milk secretion.

The mean score on level of milk secretion among postnatal mothers in study group was 2.43 in pre assessment and 7.34 in post assessment respectively. The independent't' value of 17.25 which is significant at $p < 0.05$. It shows that Music Therapy was effective in improving the level of Milk secretion.

In Control group the mean score on level of breast milk secretion among postnatal mothers was 2.47 in pre assessment and 5.90 in post assessment respectively. The estimated independent 't' value for breast milk secretion was 11.16 which was also significant at $p < 0.05$ due to normal physiology of breast milk secretion. But comparing both the values, music therapy was more significant. Hence the research hypothesis (H_1) is accepted.

The mean score on level of milk secretion among postnatal mothers study group was 7.34 and in control group was 5.90. The estimated unpaired "t" value was 4.91 which is significant at $p<0.05$. It shows that Music Therapy was effective and improved the level of milk secretion. Hence the research hypothesis (H_2) is accepted.

In Study group and in control group the calculated value of the demographic variables of postnatal mothers such as age, education, occupation, religion, type of food and parity is lesser than the table value which indicates that there is no significant association with level of breast milk secretion and demographic

CONCLUSION

The study is to assess the effectiveness of music therapy on breast milk secretion among postnatal mothers. A review of related literature enabled the researcher to develop the conceptual framework and methodology for the study. The conceptual framework adopted for this study was based on Einstein Widenbach's Prescriptive Helping Art of clinical Nursing Theory (1964). Quantitative research approach was used. Quasi Experimental pre test - post test Control group design was adopted to evaluate the effectiveness of music therapy on breast milk secretion among postnatal mothers. The study was conducted in PPK hospital. The purposive sampling technique was used to select 30 samples for Control group and 30 samples for study group.

Based on the data collected the mean score on the level of breast milk secretion in study group was 2.43 in pre assessment and 7.34 in post assessment the paired 't' value is 17.25* which is significant at $P < 0.05$. It shows that music therapy is effective in improving the breast milk secretion among postnatal mothers. From the result, the researcher concluded that providing Music therapy was effective in improving the breast milk secretion among postnatal mothers. Therefore the researcher felt that more important should be given to Music therapy for postnatal mothers to improve the level of breast milk secretion.

NURSING IMPLICATIONS

The finding of the study enables us to conclude that music therapy is effective in improving breast milk secretion among postnatal mothers which is of vital concern to the field of nursing profession including nursing practice, nursing administration, nursing education and nursing research.

- Midwife should create awareness on benefits of Breast feeding, promote and encourage practicing Music therapy among postnatal mothers.
- Nurses working in hospitals and nursing home settings can implement Music Therapy as a significant means of improving breast milk secretion.

NURSING EDUCATION

- Nursing students should receive adequate training regarding Music Therapy.
- Workshops or conferences for students should be conducted regarding the use of Music Therapy, in day today nursing practice.
- Nurse educators should ensure that Music Therapy is included in the curriculum from the basic level of nursing education..
- Nurse educator should make sure that adequate literatures are available regarding Music therapy.
- Nurse educator should provide the students with adequate exposure to breast feeding and music therapy.

NURSING ADMINISTRATION

- Nurse administrator should assist in implementing Music therapy on public health awareness in hospitals.
- Administrative staff should understand the needs of postnatal mothers.
- Nursing administrator can organize conferences, seminars and workshops for nurses working in community to encourage a positive attitude on Music Therapy.
- Request should be designed by nurses to the institutions to implement Music Therapy to mothers during postnatal period.

NURSING RESEARCH

- Nursing research is to be done to find out the various methods to improve Breast milk secretion.
- Nurses should conduct research for further clarifications of the benefits of Music Therapy on breast milk secretion.
- Nurses should be encouraged to conduct more research on the effect of Music Therapy.
- Large scale study should be conducted on benefits of Music therapy on breast milk secretion and disseminate the findings of research through conferences, seminars and publishing in nursing journals.
- A qualitative study can be adopted to find out the practice and factors influencing breast milk secretion

LIMITATION

- Since there were very few studies done on the effectiveness on music therapy on level of breast milk secretion, the investigator had lot of difficulties in collecting the study materials for the review.
- The study was conducted among the postnatal mothers, so the investigator had lot of difficulties in coping up with the timing of hospital routine.

RECOMMENDATION

The following steps can be undertaken to strengthen the study:

- The study can be conducted among large samples.
- The study can be conducted by giving music therapy for a long duration.
- The music therapy benefits can be taught to all mothers who are

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ANNEXURES I

LETTER SEEKING PERMISSION TO CONDUCT THE STUDY

St. XAVIER'S CATHOLIC COLLEGE OF NURSING

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Dr. A. REENA EVENCY, M.Sc. (N)., Ph.D.,
Principal

29/06/2015

To

Dr. Felsit Punitha,

P.P.K. Hospital,

Marthandam.

Respected Madam,

Ms.Sharon Chellathangam is a student of M.Sc. Nursing program in our college from Obstetrics and Gynaecological Nursing Department. She is conducting study on" An experimental study to evaluate the effectiveness of music therapy on breast milk secretion among postnatal mothers in selected hospital, kanyakumari District."

This is for the research project to be submitted to the Dr. M.G.R.Medical University in partial fulfillment of university requirement for the award of M.Sc. Nursing degree and will be beneficial in understanding and improving the health of the mothers in postnatal period.

As a part of her study she needs to observe the improvement of breast milk secretion during postnatal period in your hospital. So permission may kindly be granted to her to conduct the study in your esteemed hospital. She will abide by the rules and regulations of your hospital.

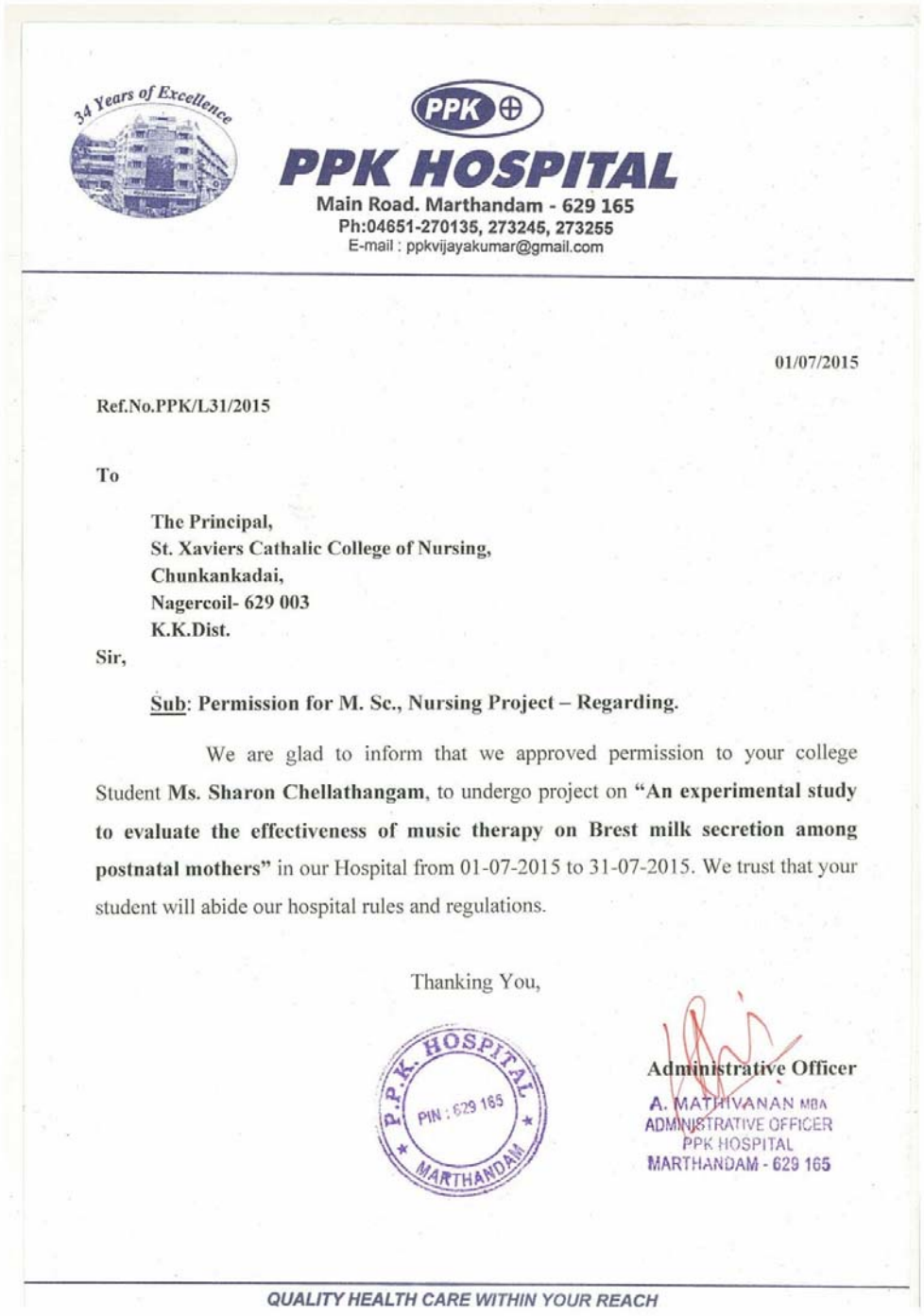
Thanking you.

Yours faithfully,

PRINCIPAL
ST. XAVIER'S CATHOLIC COLLEGE OF NURSING
CHUNKANKADAI
NAGERCOIL - 629 003
K. K. DIST.

ANNEXURES II

LETTER GRANTING PERMISSION TO CONDUCT THE STUDY



34 Years of Excellence

PPK HOSPITAL

Main Road. Marthandam - 629 165
Ph:04651-270135, 273245, 273255
E-mail : ppkvijayakumar@gmail.com

01/07/2015

Ref.No.PPK/L31/2015

To

The Principal,
St. Xaviers Cathalic College of Nursing,
Chunkankadai,
Nagercoil- 629 003
K.K.Dist.

Sir,

Sub: Permission for M. Sc., Nursing Project – Regarding.

We are glad to inform that we approved permission to your college Student **Ms. Sharon Chellathangam**, to undergo project on **"An experimental study to evaluate the effectiveness of music therapy on Brest milk secretion among postnatal mothers"** in our Hospital from 01-07-2015 to 31-07-2015. We trust that your student will abide our hospital rules and regulations.

Thanking You,

P.P.K. HOSPITAL PIN : 629 165 MARTHANDAM

Administrative Officer

A. MATHIVANAN MBA
ADMINISTRATIVE OFFICER
PPK HOSPITAL
MARTHANDAM - 629 165

QUALITY HEALTH CARE WITHIN YOUR REACH

ANNEXURES III

LETTER SEEKING EXPERTS OPINION FOR THE VALIDITY OF THE TOOL

From,

Ms. Sharon Chellathangam,
M.Sc. Nursing II year,
St. Xavier's Catholic college Of Nursing,
Chunkankadai.

To,

Respected Sir/ Madam,

Sub: Requisition to expert opinion and suggestion for the content validity.

I Ms.Sharon chellathangam,,M.Sc. Nursing II year student of St.Xavier's Catholic College Of Nursing, Chunkankadai, has selected the following topic, **" A quasi experimental study to evaluate the effectiveness of Music Therapy on level of breast milk secretion among postnatal mothers in selected hospital, Kanayakumari District"** for my dissertation to be submitted to The Tamilnadu Dr. M.G.R. Medical University in the partial fulfilment of the requirement for award of Master of science in Nursing.

I request you to go through the items and give your valuable suggestions and opinions to develop the content validity of the tool. Kindly suggest modifications, addition and deletions if any in the remarks column.

Thanking You,

Place: Chunkankadai Yours sincerely,

Date : Ms.Sharon Chellathangam.

ENLOSURE:

1. Problem statement, objectives, and hypotheses of the study.
2. Demographic profile.
3. Modified Breast Feeding Assessment Tool.
4. Evaluation Performa.

ANNEXURES IV

EVALUATION CRITERIA CHECKLIST FOR VALIDATION

Instructions:

The expert is requested to go through the following criteria for evaluation. Three columns are given for responses and a column for remarks. Kindly please tick mark (✓) in the appropriate columns and give remarks. Interpretation column:

Column I – meets the criteria.

Column II - Partially meets the criteria.

Column III – does not meet the criteria.

S.NO	CRITERIA	1	2	3	REMARKS
1	Scoring -adequacy. -clarity. -simplicity.				
2	Content -logical sequence. -adequacy. -relevance.				
3	Language -Appropriate. -clarity. -simplicity.				
4	Practicability -easy to score. -precise. -utility.				

Signature: Any other suggestion:

Name:

Designation:

Address:

CRITERIA CHECK LIST FOR VALIDATION OF THE TOOL

Instruction:

Kindly give your suggestions regarding the accuracy, relevance and appropriateness of the content. Kindly (✓) against specific columns.

PART-I

VALIDATION OF DEMOGRAPHIC VARIABLES

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
1					
2					
3					
4					
5					
6					
7					
8					
9					

PART-II

Validation of Modified Via Christi Breastfeeding Assessment Tool.

Item	Very relevant	Relevant	Need for modification	Not relevant	Remarks
INADEQUATE					
MODERATE					
ADEQUATE					

ANNEXURE V

LIST OF EXPERTS VALIDATED THE TOOL

1. Dr. Caroline Felcia Mary MD., DGO.
   Obstetrician and Gynaecologist,
   Caroline John hospital,
   Asaripallam,
   Nagercoil – 629 001.

2. Dr.Felsit punitha, M.B.B.S., M.D,
   Obstetrician and Gynaecologist,
   PPK hospital,
   Marthandam.

3. Mrs.Arzta Sophia, M.Sc.(N),
   Associate professor,
   Christian College of Nursing,
   Neyyoor.

4. Mrs.Gladin, M.Sc., (N)
   Associate professor,
   P.S College of Nursing,
   Thalakulam.

5. Mrs.Jeba Nesa Mahiba
   Associate professor,
   Christian college of nursing,
   Neyyoor.

ANNEXURE VI

CERTIFICATE OF MUSIC THERAPY

CERTIFICATE FOR MUSIC SELECTION

TO WHOMSOEVER IT MAY CONCERN

This is to certify that, for the dissertation entitled, **"A quasi experimental study to evaluate the effectiveness of music therapy on breast milk secretion on postnatal mother in selected hospitals, Kanayakumari District"** by Ms. Sharon Chellathangam , student of St. Xavier's Catholic college of Nursing, Chunkankadai ,can use Instrumental music of Anandabairavi Ragam, as it will be appropriate for the purpose.

C. Faile

INFANT JESUS MATRICULATION
HIGHER SECONDARY SCHOOL,
MARTHANDAM - 629165.
K.K. DISTRICT, TAMIL NADU.

ANNEXURE VII
TOOL FOR DATA COLLECTION

PART - I

DEMOGRAPHIC VARIABLES

INTERVIEW SCHEDULE

Instructions

The investigator will ask the item listed below and place the tick mark (✓) against the response given by the respondents.

1. Age

a) 18 – 23 years ( )
b) 24 – 28 years ( )
c) 29 – 33 years ( )
d) 34 - 40 years ( )

2. Educational status

a) Illiterate ( )
b) School education ( )
c) Under graduate ( )
d) Post graduate ( )

3. Occupation
a) Unemployed ( )
b) self employed ( )
c) government employed ( )
d) private employed ( )

4. Religion
a) Hindu ( )
b) Christian ( )
c) Muslim ( )

5. Type of food

a) Vegetarian ( )
b) Non vegetarian ( )

6. Parity

a) Primi para ( )
b) Multi para ( )
c) Grand multi para ( )

PART II

MODIFIED CHRISTI BREAST FEEDING ASSESSMENT TOOL ON LEVEL OF BREAST MILK SECRETION

Score	0	1	2	Day							
				Pre	1	2	3	4	5	6	Post
Latch-on	No latch on achieved	Latch on after repeated attempts	Eagerly grasped breast to latch on								

Length of time before latch-on and suckle	Over 10 min	4-6 min	0-3 min								
Suckling	Did not suckle	Suckled but needed encouragement	Suckle rhythmically with lips flanged								
Audible swallowing	None	Only if stimulated	Over 48 hours frequently								
Mom's evaluation	Not pleased	Somewhat pleased	Pleased								

Total score=

Scoring:

a) 0 – 2:Inadequate
b) 3 – 6:Moderate
c) 7 – 10:Adequate

ANNEXURE VIII

Table 3.2: Data collection period, number of sample and method of sample selection

S.No	**Date**	**Number of samples**		**Method of sample selection**
		Study group	**Control group**	
1	01-07-2015	02		
2	02-07-2015	03		
3	03-07-2015	03		
4	04-07-2015	02		
5	06-07-2015	02		

6	07-07-2015	03		Purposive sampling technique used
7	08-07-2015	02		
8	09-07-2015	02		
9	10-07-2015	03		
10	11-07-2015	03		
11	13-07-2015	02		
12	14-07-2015	03		
13	15-07-2015		02	
14	16-07-2015		02	
15	17-07-2015		03	
16	20-07-2015		03	
17	21-07-2015		02	
18	22-07-2015		04	
19	23-07-2015		03	
20	24-07-2015		03	
21	25-07-2015		03	
22	27-07-2015		02	
23	29-07-2015		02	
24	31-07-2015		01	

ANNEXURE IX

CERTIFICATE OF STATISTICAL ANALYSIS

CERTIFICATE OF STATISTICAL ANALYSIS

TO WHOM SO EVER IT MAY CONCERN

Certified the dissertation paper titled **"A study to evaluate the effectiveness of music therapy on level of breast milk secretion of postnatal mothers in selected hospital at kanyakumari district"** done by Ms.Sharon Chellathangam. has been Checked for the accuracy in statistical analysis and interpretation and was appropriate for the purpose.

Signature 5/2/16

Dr. G. IMMANUEL, Ph.D.
Assistant Professor
Centre for Marine Sciences & Technolo
Manonmaniam Sundaranar University
Rajakkamangalam-629 502
K.K. District, South India

ANNEXURE X

CERTIFICATE OF EDITING

CERTIFICATE OF EDITING

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the dissertation paper entitled **"A quasi experimental study to evaluate the effectiveness of music therapy on level of breast milk secretion among postnatal mothers in selected hospital, kanya kumari district. "** by Ms.Sharon Chellathangam , has been checked for the accuracy and correctness of English language usage and that the language used in the tool is lucid , unambiguous , free of grammatical and spelling errors and appropriate for the purpose

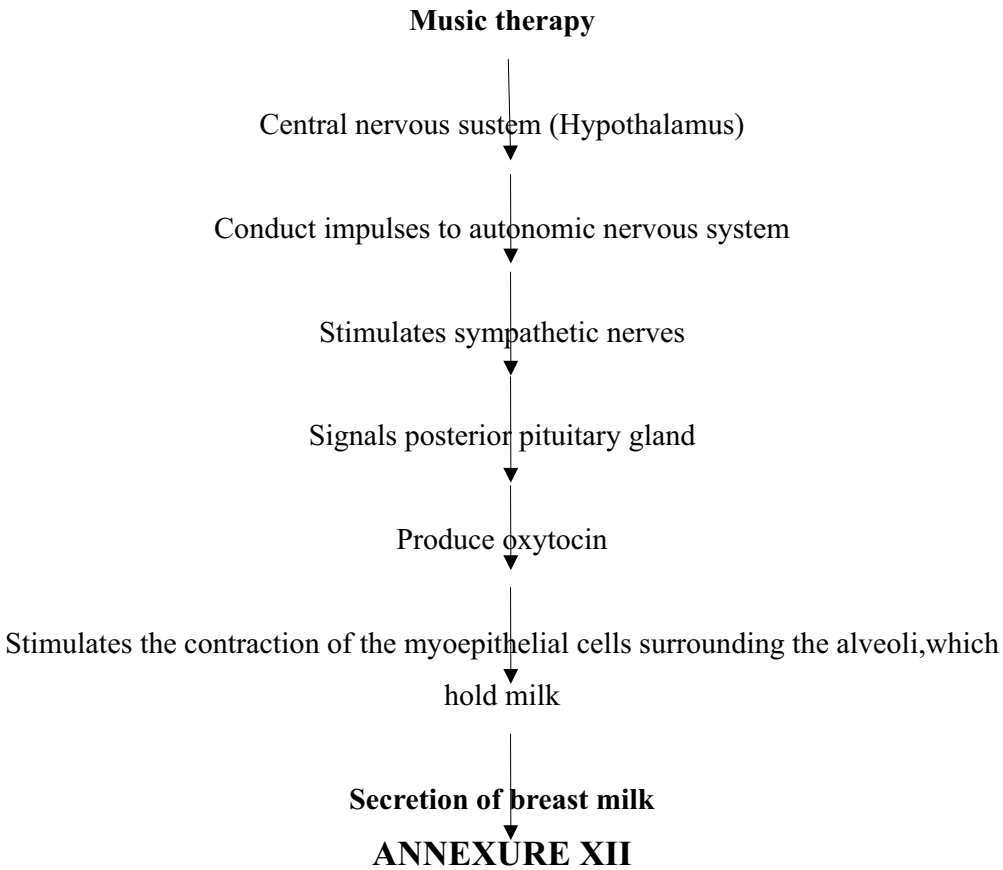
signature

Correspondent
St. Mary's School (CBSE)
Amanattantheri, Enayam,
K. Dist. Tamil Nadu - 629193

ANNEXURE XI

MECHANISM OF MUSIC THERAPY ON BREAST MILK SECRETION

Music may have physiological effects on blood pressure, cardiac heartbeat, respiration, and improve mood state in people affected by anxiety, depression and other psychiatric disorders. Exposure to music in postnatal mothers can also stimulate the hypothalamus and stimulate breast milk secretion.



ANNEXURE XII

FORMULAS USED FOR DATA ANALYSIS

DESCRIPTIVE STATISTICS

Mean

$$\acute{x} = \frac{\sum x}{N}$$

Standard deviation

$$s = \sqrt{\frac{\sum \left(x - \acute{x}\right)^2}{n-1}}$$

INFERENTIAL STATISTICS

Independent 't' test

$$t = \frac{|x_1 - x_2|}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

$$s = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}}$$

Paired 't' test

$$t = \frac{\acute{d}\sqrt{n}}{s}$$

$$s = \sqrt{\frac{\sum (d - \acute{d})^2}{n - 1}}$$

Chi-Square test

$$x^2 = \sum \frac{(o - e)^2}{e}$$

ANNEXURE XIII

PHOTOGRAPHY ON MUSIC THERAPY