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"A COMPARATIVE STUDY TO ASSESS THE EFFECTIVENESS OF MANUAL BREASTMILK EXTRACTOR VERSUS ELECTRONIC BREASTPUMP AMONG POSTNATAL MOTHERS WITH BREAST ENGORGEMENT AT SMVMCH, PUDUCHERRY".

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ABSTRACT

Breastmilk is nature and perfect nourishment for babies. Due to the advantages of breastfeeding and the excess risk for poor maternal and child health outcomes associated with not breastfeeding, every major health organization recognizes breastfeeding as the physiologic norm and standard of infant feeding. Lactation is the physiologic method of nourishment and immune protection for all infant mammals, and breastfeeding or feeding breastmilk to a child through breast-to-mouth contact has been the standard method of feeding for human infants throughout history. The study was conducted to assess the effectiveness of manual breastmilk extractor versus electronic breast pump among postnatal mothers with breast engorgement at SMVMCH, Puducherry. A total of 50 postnatal mothers were selected by using a simple random sampling technique and the study was carried out in Sri Manakula Vinayagar Medical College and Hospital. The data was collected by using the visual

analog scale and Storr scale. The study results showed that Majority of the postnatal mothers 17(68%) had severe pain and 8(32%) had moderate pain level. The mean and standard deviation of the level of pain before and after Manual breastmilk extractor among postnatal mothers is (8.04±1.428) respectively. The effectiveness of the research study is verified by its utility by the nurse in the practical field.

Key words: Manual breastmilk extractor, Electronic breast pump, postnatal mothers

INTRODUCTION:

Breastmilk is nature and perfect nourishment for babies. Due to the advantages of breastfeeding and the excess risk for poor maternal and child health outcomes associated withnot breastfeeding, every major health organization recognizes breastfeeding as the physiologic norm and standard of infant feeding. Lactation is the physiologic method of nourishment and immune protection for all infant mammals, and breastfeeding or feeding breastmilk to a child through breast-to-mouth contact has been the standard method of feeding for human infants throughout history.

Throughout the ages, people have experimented with sources of nourishment other than breastmilk. Common substitutes have been sugar water, honey, or broth. Often, finely ground mixes of oats, barley, or wheat were added to the mix. Unfortunately, these options were not enough nourishment for infants and were subject to contamination, and many infantsdied or had other health problems. Nutritional inadequacy and contamination of non-humanmilk remained a leading cause of infant mortality in the United States until the twenty-first century, and in some parts of the world it remains so.

Aim of the Study :

The aim of the study was to assess the effectiveness of Manual breastmilk extractor versus and Electronic breatpump.

Objectives:

- To assess the level of breast engorgement and pain before and after Manual breastmilkextractor versus Electronic breast pump among postnatal mothers.
- To compare the effectiveness of Manual Breastmilk extractor versus Electronic breastpump among postnatal mothers.
- To correlate the level of breast engorgement among postnatal mothers in terms of breastengorgement with pain, maternal satisfaction, amount of breastmilk extraction and duration of breastmilk extraction.
- To associate the effectiveness of Manual breastmilk extractor versus Electronic breastpump with their selected demographic variables among postnatal mothers.

HYPOTHESES:

- **H1:** There is a significant difference in the level of breast engorgement with pain before and after Manual breastmilk extractor versus Electronic breast pump among postnatal mothers.
- **H2:** There is a significant difference in the level of pain, duration of breastmilk extraction, amount of breastmilk extraction and maternal satisfaction using Manual breastmilk extractor versus Electronic breast pump among postnatal mothers.
- **H3:** There is a significant difference in the post level breast engorgement between Manual breastmilk extractor and Electronic breastpump.
- **H4:** There is a significant association between manual breastmilk extractor versus electronic breast pump with their selected demographic variables among postnatal mothers.

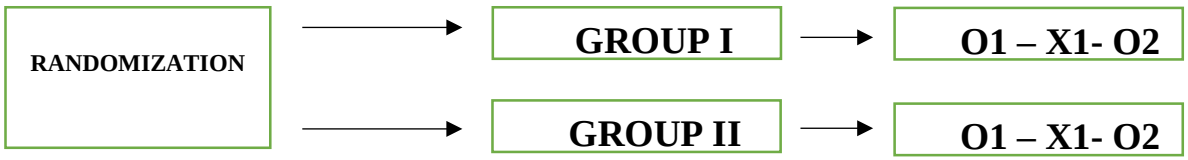
METHODOLOGY:

The selection of research approach is the basic procedure for conducting research enquiry. A research approach gives information about the data to collect, and how to analyse it also suggests possible conclusions to be drawn from the data. In view of the nature of the problem selected for the study and the objectives to be accomplished, was considered the best to determine the effectiveness of manual breastmilk extractor and electronic breatpump. A quantitative research approach was considered as appropriate for the present study.

RESEARCH DESIGN:

In the present study, True-experimental comparative research design was selected for the study. The primary objective of the study was to find the effectiveness of manual breatmilk extractor versus electronic breast pump. The study is presented in the table as follows

The research design for this study is True experimental comparative research design.



KEY

O1 – Pre assessment of breast engorgement (Storr scale & Visual analog scale)

X1 – Manual breastmilk extractor

X2 – Electronic breast pump

RESEARCH SETTING:

The study will be conducted at Sri Manakula Vinayagar Medical College and Hospital, a It consist of 1050-bedded hospital in Puducherry. The population of the study postnatal mothers at SMVMCH, Puducherry. sample size is the number of subjects involved in the study. sample size consist of 50 postnatal mothers. Sampling refers to the process of selecting a portion of the population to represent the entire population. Sampling technique chosen was simple random sampling technique (lottery method).

TOOL DESCRIPTION:

SECTION- A:

It consists of

Section A 1: Demographic variables

Section A 2: Obstetrical variables

- **Section A1** consists of demographic variables such as age of mother, religion, education, occupation, nature of marriage, residence, type of family and income.
- **Section A2** consists of obstetrical variables such as gravida, para, mode of delivery, sex of the baby, feeding pattern to newborn, maternal dietary pattern, number of postpartum days, day of interrupted breastfeeding, complications in breast, APGAR score at 1minute and 5 minutes and classification of newborn.

SECTION B : Visual analog scale

A Visual Analogue Scale (VAS) is one of the pain rating scales used for the first time in 1921 by Hayes and Patterson. It is often used in epidemiologic and clinical research to measure the intensity or frequency of various symptoms. From the mother's perspective, this spectrum appears continuous ± their pain does not take discrete jumps, as a categorization of none, mild, moderate and severe would suggest. It was to capture this idea of an underlying continuum that the VAS was devised.

SECTION C : Storr scale

Storr scale (1988) used for assessing breast engorgement before and after the applicationof chilled cabbage leaves. Results: The study results show that there was a reduction in breast engorgement after the intervention and statistically verified. It comprises of 5 componentsorganized as normal as breast heavy and slightly warm and moderate pain in pregnancy and no pain, breast beginning to feel full and mild pain, breast heavy and slightly warm and moderate pain, breast warm and heavy and severe pain, breast very hard and worst pain. Each components having minimum score 0 and maximum score 4.

Data collection procedure:

The data collection done with the permission to conduct the study was obtained from authorities of the concerned person Sri Manakula Vinayagar Medical college and Hospital , Puducherry. 50 postnatal mothers were selected by using simple random sampling techniques and according to the inclusion and exclusion criteria and after introducing and explain the purpose of the study. The tool consists of demographic variables and question variables were administered to respondents data was collected.

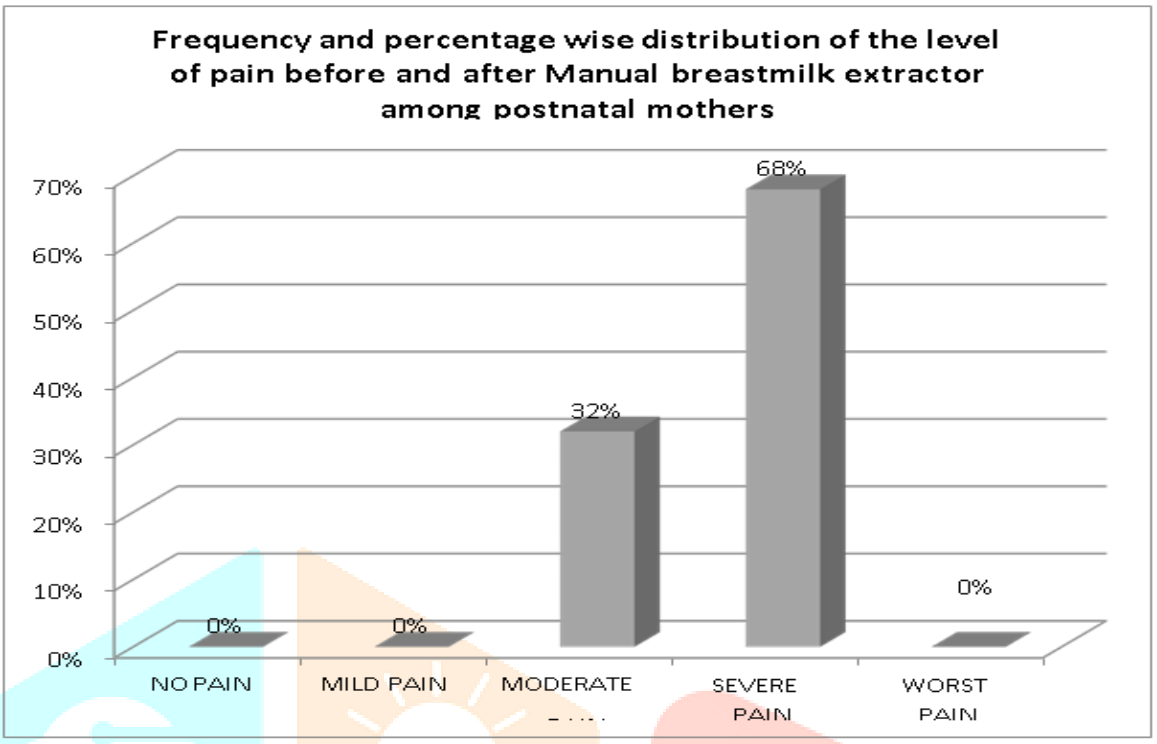
RESULTS AND DISCUSSION:

Frequency and percentage wise distribution of the level of pain before and afterManual breastmilk extractor among postnatal mothers.

(N=25)

LEVEL OF PAIN [MANUAL BREASTMILK EXTRACTOR]	**FREQUENCY (n)**	**PERCENTAGE (%)**
No pain	0	0
Mild pain	0	0
Moderate pain	8	32
Severe pain	17	68
Worst pain	0	0
Total	**25**	**100**
Mean±Standard deviation	8.04±1.428	

FREQUENCY AND PERCENTAGE WISE DISTRIBUTION OF THE LEVEL OF PAIN BEFORE AND AFTER MANUAL BREASTMILKEXTRACTOR AMONG POSTNATAL MOTHERS

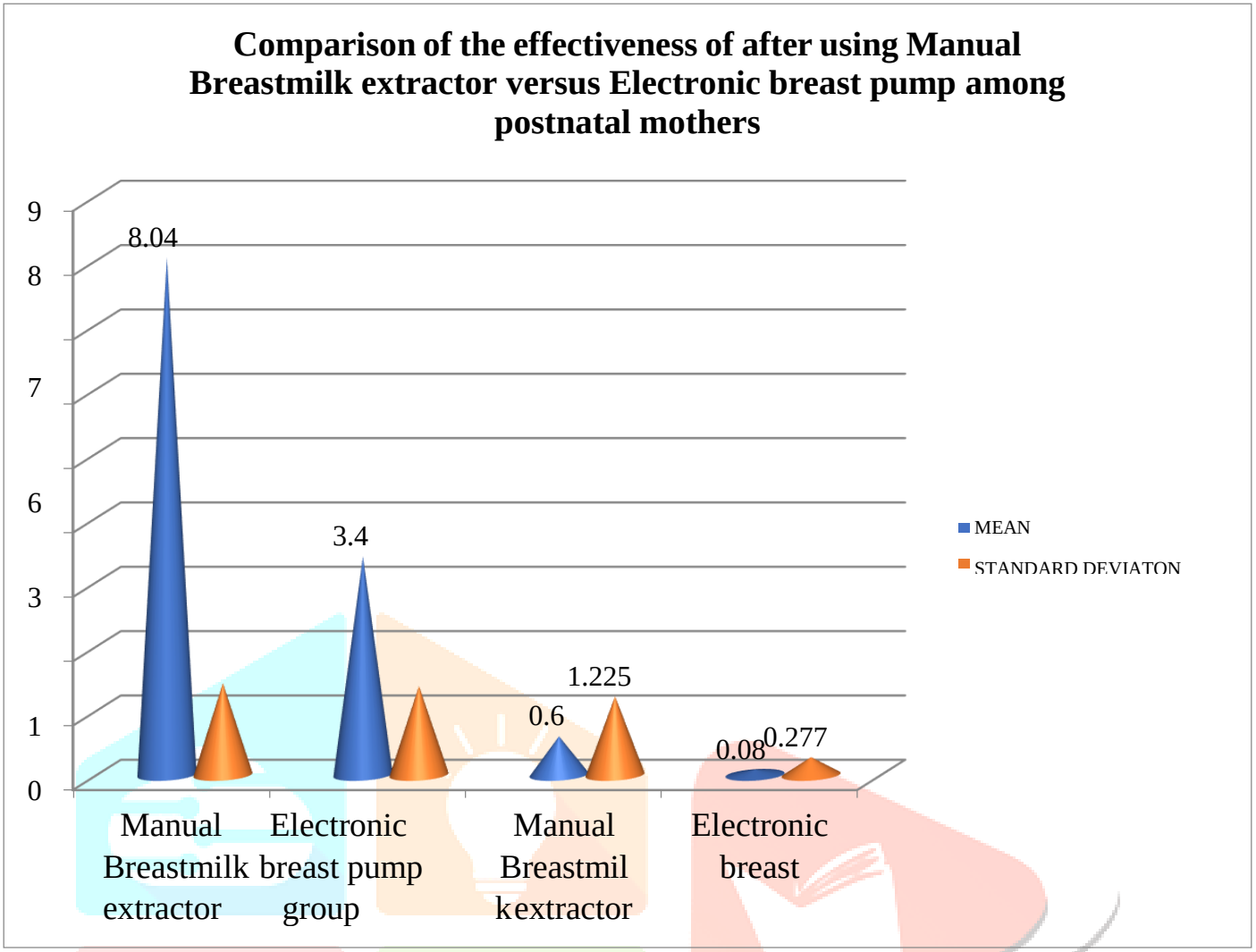


Frequency and percentage wise distribution of the level of pain before and afterElectronic breast pump among postnatal mothers. ***(N=25)***

LEVEL OF PAIN [ELECTRONIC BREAST PUMP]	**FREQUENCY (n)**	**PERCENTAGE (%)**
No pain	0	0
Mild pain	20	80
Moderate pain	5	20
Severe pain	0	0
Worst pain	0	0
Total	**25**	**100**
Mean±Standard deviation	3.40±1.384	

Frequency and percentage wise distribution of the Storr level of pain before andafter Manual breastmilk extractor among postnatal mothers. ***(N=25)***

STORR LEVEL [MANUAL BREASTMILK EXTRACTOR]	**FREQUENCY (n)**	**PERCENTAGE (%)**
Normal as breast heavy and slightly warm andmoderate pain in pregnancy and no pain	21	84
Breast beginning to feel full and mild pain	0	0
Breast heavy and slightly warm and moderatepain	0	0
Breast warm and heavy and severe pain	4	16
Breast very hard and worst pain	0	0
Total	**25**	**100**
Mean±Standard deviation	0.60±1.225	



CONCLUSION:

The result of this study shows that frequency and percentage wise distribution of the level of pain before and after Manual breastmilk extractor among postnatal mothers. Majority of the postnatal mothers 17(68%) had severe pain and 8(32%)had moderate pain level. The mean and standard deviation of the level of pain before and after Manual breastmilk extractor among postnatal mothers is (8.04±1.428) respectively. Statistical evidence that the Electronic breast pump is more effective than Manualbreastmilk extractor in reducing the breast engorgement. Electronic breast pump are having more normal level than Manual breastmilk extractor and many women find this isthe easiest way to express. Electronic breast pump expression will experienced by the mother less pain, comfort, and helps to maintain lactation for a longer period and also it helps in easy way of giving expressed breastmilk practice for newborn. Thus, this extractor can be practice everywhere with minimal cost for all socioeconomic status women. At the outset the researcher concluded that **"Practice makes man perfect" and"Prevention is better than cure"**

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