



A Study To Assess The Effectiveness Of Awareness Campaign On Knowledge Regarding Expression And Storage Of Breast Milk Among Working Mothers Of Infants In Selected Urban Community Areas Of Jabalpur, (M.P.)

Dr.Vinitha Suresh¹

Ms.Priya Choudhary², Ms Pransi Patel³, Ms Priya Devi⁴, Mr. Shivank Tiwari⁵, Ms. Priyanka Patel⁶, Ms.Sabhya Ghore⁷, Ms.Pratiksha Patel⁸.

(OBG .Department,)

Regional Institute Of Nursing ,Jabalpur

(Global Group Of Institutions)

Corresponding Author :¹Dr .Vinitha Suresh , Professor and HOD (OBG & Gynae Nursing)

Email: sureshvinitha02@gmail.com

DOI 10.5281/zenodo.16917225

DOP:21/08/2025

ABSTRACT

Breastfeeding is the natural step after the childbirth and it is a very special gift from a mother to her baby. the use of expressed breast milk has been advocated as an effective way of encouraging and maintaining lactation when the mother is separated from the baby. However, Prospects of expressed breast milk for any considerable period of time is unavoidable in new natal units and in many household, especially among working mothers who need to report back to work soon after delivery. Expressing breast milk introduces an opportunity for mother to feed the baby and also abiding by exclusive breast feeding scenario .The purpose of the study was to know how working women breastfeed their children and their knowledge about breast milk expression and storage as the mother returns to work.

Methodology

The quantitative and evaluative research approach was used and a pre experimental one group pre-test and post-test design was used. The study was conducted in selected urban community area of Jabalpur. The sample consist 40 working mothers of infants selected by purposive sampling technique. The data was analysis using descriptive and inferential statistics.

Findings

According to study only 4(10%) working mothers are using expressed breast milk out of 40. Analysis revealed that there was marked increase in the mean value from 12.87 in the pre test to 18.96 in post test and the standard deviation is increased from 4.60 in pre test to 6.30 in the post test. The mean difference was 6.09 and SD difference was 1.7 and the calculated 't' value was 4.939 and table value at 0.05 level is 2.02 .calculated value was more than table value (4.939>2.02) at significant level (0.05). So alternative hypothesis was accepted. the statistically high significant difference between the pre and post test level of knowledge. Hence it indicates awareness campaign was effective.

KEY WORDS: Awareness Campaign, Knowledge, Breast Milk Storage And Expression ,Working Mothers ,Infants

INTRODUCTION

According to WHO and UNICEF, exclusive breastfeeding for 6 months is the single most effective child survival intervention which reduces the under five children death about 16% in India. The purpose of the study was to know how working women breastfeed their children and their knowledge about breast milk

expression and storage.

(WHO2021).

There are multiple ways to express breast milk, including by hand or with a pump:

- **BY HAND** –Use hands to manually express milk



by creating a "C" shape with thumb and fingers around the breast. Press fingers and thumb together, then release to create suction.

- **BY MANUAL PUMP**- These handheld devices require to squeeze a handle to create suction. Place the funnel over nipple and use the handle to overcome milk.
- **ELECTRICAL PUMP** - These pumps use a motor to create suction. They can be single (expressing milk from one breast at a time) or double (expressing from both breasts simultaneously) (NHS.uk,2023)

Proper containers are essential for collecting **STORAGE BAGS** : Single -use, pre-sterilized plastic bags designed specifically for collecting breast milk.

GLASS CONTAINERS :Sterilizable glass bottles or jars with airtight lids. Durable, reusable, chemical free and do not absorb odors .

- **PLASTIC CONTAINERS** :BPA free plastic containers are primarily free plastic bottles or containers with tight- fitting lids. Lightweight, durable, reusable, and less likely to break use for storing breast milk.
- **STAINLESS STEEL CONTAINERS** :Sterilizable stainless steel bottles or containers with secure lids. Durable, reusable, chemical-free, and resistant to odors and stains.

Freshly expressed or pumped milk can be stored: At room temperature (77°F or colder) for up to 4 hours. In the refrigerator for up to 4 days .In the freezer for about 6 months is best; up to 12 months is acceptable. Recommended storage times are important to follow for best quality.(Cdc .gov, 2017)

From the research point of view , there is a need to study the knowledge regarding expression and storage of breast milk among the working mothers of infants, because there are many mothers who take care of their child along with work or college, but due to not being able to give time to their child, She is not able to breastfeed her child according to his demand ,which increases malnutrition and many diseases in children. Through this study, people should gain knowledge about the importance of breastfeeding and will gain

knowledge about how milk should be expressed and stored .

OBJECTIVES OF THE STUDY

1. Determine the incidence of mothers using expressed breast milk.
2. Assess the pre - test knowledge on expression and storage of breast milk among working mother.
3. Assess the post - test knowledge on expression and storage of breast milk among working mother.
4. Assess the effectiveness of awareness campaign terms of comparing pre and post-test knowledge on expression and storage of breast milk among working mother .
5. Determine the association between pretest knowledge on expression and storage of breast milk with their selected demographic variable

HYPOTHESES

(All hypothesis were tested at 0.05 level of significant)

H₁ - There will be a significant mean difference between pre tests and post test on knowledge scores regarding expression and storage of breast milk among working mothers of infants in Jabalpur.

H₂ - There will be significant association between the pre - test knowledge score and selected demographic variables.

DELIMITATIONS

- 1 The study was delimited to lactating working mother of infants.
2. The number of participants was 40 mothers.
3. The study was delimited to a specific geographical area i.e. Selected urban community area of Jabalpur.

OPERATIONAL DEFINITIONS

1. Assess – According to the study it refers to the measurement of knowledge about expression and storage of breast milk among working mother of infant by using appropriate tool develop by investigator.

2. Effectiveness :- "In refure to the study it is determined by the significant mean differences between pre and post - test levels of knowledge



among working mothers of infants regarding expression and storage of breast milk" with the use of pamphlet, videos, flipchart.

3. Awareness campaign - According to study an awareness campaign is a planned group of activities that aim to increase public awareness among working mother of infants related to expression and storage of breast milk.

4. Knowledge - According to the study it is the information acquired through awareness campaign regarding expression and storage of breast milk as measured by structured questionnaire prepared by the researcher.

5. Expression and storage of breast milk -: According to the study refers to the expression of the breast milk by means of manual massage or breast pump and Breast milk storage involves keeping breast milk in a safe and hygienic way so that it can be used later

METHODOLOGY

The quantitative and evaluative research approach was used and a pre experimental one group pre-test and post- test design was used. The study was conducted in selected urban community area of Jabalpur. The sample consist 40 working mothers of infants selected by purposive sampling technique. The data was analysis using descriptive and inferential statistics.

CRITERIA FOR SELECTION

SCORING CRITERIA

Level of knowledge	Score Range
Poor	0-10
Average	11-20
Good	21-30

ETHICAL CONSIDERATIONS

The research committee has approved the research problem and objectives stated for the present study. Informed consent was obtained from the Permission authority of the region. Explanation was given regarding the purpose of

Inclusive criteria

1. Working mothers of infants
2. Mothers who can read and write English and Hindi
3. Willing to participate in the study

Exclusive criteria

1. Mothers having severe medical and obstetrical complications.
2. Not available at the time of data collection

DESCRIPTION OF THE TOOL

The structured questionnaire constructed by the investigator consist of Three sections

Section A :- Consists of demographic variables which consists of 7 items: Age, education, occupation, no. of Children, total income of family, type of family and knowledge of mother regarding expression and storage of breast milk.

Section B:- Consists of incidence of mothers using expressed breast milk.

Which includes how many out of 40 mothers uses the method of expression and storage of breast milk

Section C:- Structured knowledge questionnaires regarding expression and storage of breast milk

It has 30 questions which determine the mother's knowledge level.



the study. Confidentiality was ensured. Permission from the higher authorities was obtained. Any individual participant has the right to leave from the study at any time without assigning any reason there of to the investigator. Participants have not been harmed in any way. No direct application has been made for any way on the participants.

ANALYSIS

SECTION I

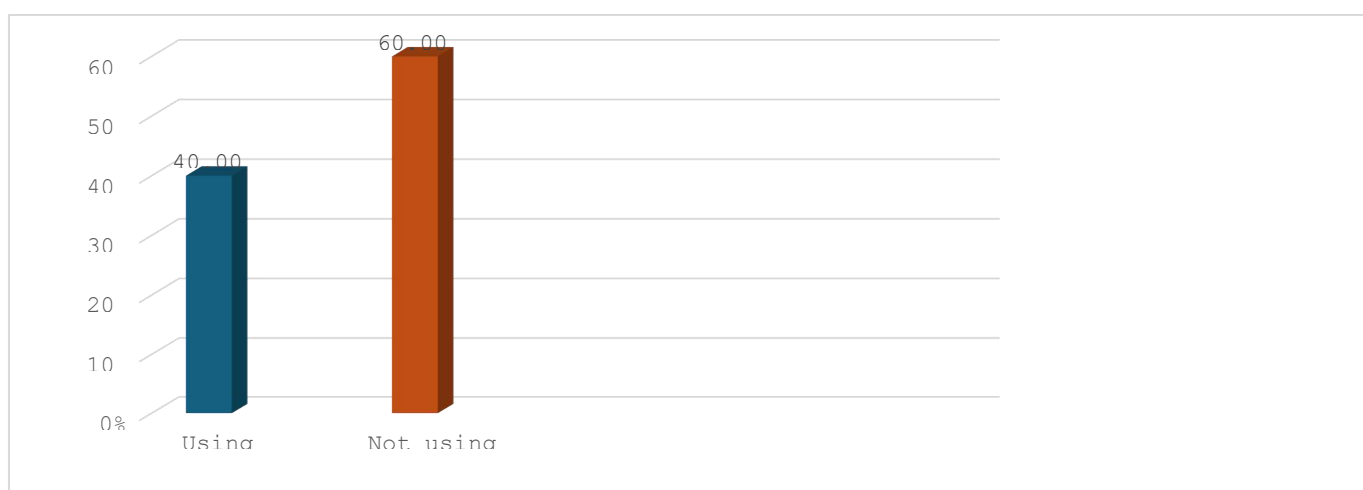
Demographic distribution From the major finding, the majority of the 40 samples. It was relieved that about the working mothers of infants maximum 31(77.5%) are in the age group of 20-30 years, 9(22.5%) are in the age group of 31-40 year, 0(0%) are in the age group of below 20 year. Maximum 20(50%) educational qualification higher secondary pass, 9(22.5%) are graduated, 8(20%) are postgraduate and above, 2(5%) are primary pass and only 1(2.5%) is not been to school. Maximum 18(45%) are other occupation, 15(37.5%) are self employed, 6(15%) are private employed and only 1(2.5%) are government employed. Out of 40 working mothers 19(47.5%) have two childrens, 13 (32.5%) have single children, 7(17.5%) have three childrens and only 1(2.5%) have more than three child. Family income out of 40 working mothers 16 (40%) have less than 10,000,12(30%) have 10,000-20,000,8(20%) have more than 40,000 and 4(10%) have 20,001-40,000. Out of 40 working mothers 22(55%) have joint family, 15(37.5%) have nuclear family, 3(7.5%) have extended family and 0 (0%) have single family. Out of 40

working mothers 20(50%) have no knowledge regarding expression and storage of breast milk, 9(22.5) from social media, 7 (17.5%) from family and friends and 4(10%) from health personnel

SECTION – II

INCIDENCE OF WORKING MOTHERS OF INFANTS ACCORDING TO WHO ARE USING EXPRESSED BREAST MILK

According to study only 4(10%) working mothers were using expressed breast milk out of 40. Now the objective 1 was fulfilled



SECTION – III

Distribution of working mothers according to their knowledge score on expression and storage of breast milk



S.N.	Grade	Frequency (n)	Percentage (%)	Mean	SD
1	Poor	10	25%	12.87	4.60
2	Average	30	75%		
3	Good	0	0%		

Depicts that grade wise distribution of pre –test knowledge score of mother .In pre-test 30(75%) have average knowledge, 10(25%) mothers have poor knowledge and 0(0%) have good knowledge.

The mean knowledge score of pre-test of mothers is 12.87 with standard deviation 4.60 . Table reveals that there is gain in knowledge score. Now the objective II was fulfilled

SECTION – IV

GRADE WISE DISTRIBUTION OF FREQUENCY, PERCENTAGE, MEAN AND STANDARD DEVIATION OF POST TEST KNOWLEDGE SCORE OF WORKING MOTHERS.

S.N.	Grade	Frequency (n)	Percentage (%)	Mean	SD
1	Poor	3	7.05%	18.96	6.30
2	Average	20	50%		
3	Good	17	42.5%		

Depicts that grade wise distribution of post –test knowledge score of mother .In post-test 20(50%) have average knowledge, 3(7.5%) mothers have poor knowledge and 17(42.5%) have good knowledge.

The mean knowledge score of pre-test of mothers is 18.96 with standard deviation 6.30 . Table reveals that there is gain in knowledge score.Now the objective III is fulfilled

SECTION – V

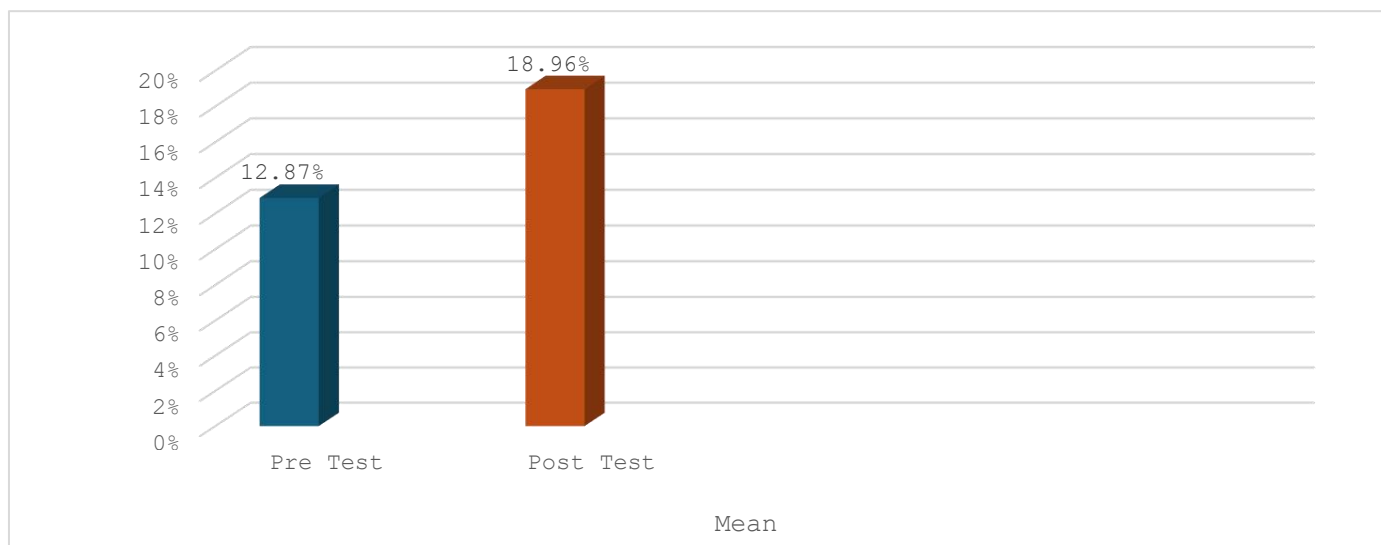
ANALYSIS OF EFFECTIVENESS OF AWARENESS CAMPAIGN ON KNOWLEDGE REGARDING EXPRESSION AND STORAGE OF BREAST MILK AMONG WORKING MOTHERS OF INFANTS

TEST	MEAN	MEAN DIFFERENCE	SD	SD DIFFERENCE	DF	t VALUE	REMARKS
Pre test	12.87	6.09	4.60	1.7	39	4.939	Significant



Post test	18.96		6.30				
-----------	-------	--	------	--	--	--	--

(Table value - the table value at 0.05 level is 2.02)



calculated 't' value 4.939. since the table value at 0.05 level is 2.02 and calculated t value is 4.939 is greater than the table value, the difference is statistically significant.

Hence H1 was accepted – There is significant difference between mean pre-test and post-test knowledge score regarding expression and storage of breast milk among working mothers of infants. Now the objective IV is fulfilled.

SECTION – VI

Association of pre-test knowledge score of mothers with selected demographic Variables.

On the association of pre-test knowledge with the demographic variable, it was found that age (chi value 3.871), education (chi value 6.3263), occupation (chi value 3.0187), number of children (chi value 1.4385), family income (chi value 4.6631), type of family (chi value 6.083), source of information (chi value 2.4001), regarding expression and storage of

breast milk are having non significant relation with pre-test knowledge score. All variables find in this study are not significant. so hypothesis H₂ was rejected.

CONCLUSION

IEC (Information, Education, and Communication) is crucial in the expression and storage of breast milk because it empowers mothers with the necessary knowledge and practices to safely collect, store, and feed expressed breastmilk to their babies, ensuring the milk retains its nutritional value and minimizes the risk of contamination, especially when not breastfeeding directly; this includes proper hygiene practices, appropriate storage temperatures, and understanding the guidelines for thawing and rewarming milk. It is apparent that there is a significant gap in research between knowledge and practice of working mothers on expression and storage of breast milk. Research should be continued on prevention of infants mortality rate and effectiveness of awareness campaign on knowledge regarding expression and storage of breast milk.

Fulfilling the Millennium Development Goals



(MDGs) -

a) Reduce the child death
maternal health

b) Improve *Mothers of Children under 6 Months of Age in Suva,*
Fiji. Retrieved from:

<https://www.foodandnutritionjournal.org/volume9number3/knowledge-attitude-and-practices-of-breastfeeding-among-mothers-of-children-under-6-months-of-age-in-suva-fiji/>

REFERENCES

•Centers for Disease Control and Prevention (CDC). *Maternal Diet and Micronutrients*. Retrieved from:
<https://www.cdc.gov/breastfeeding-special-circumstances/hcp/diet-micronutrients/maternal-diet.html>

•ResearchGate. (2021). *[Relevant Article Reference – link provided]*. Retrieved from:
<https://www.researchgate.net/publication/356839222>

•Washington University in St. Louis Libraries. *How to Write a Literature Review*. Retrieved from:
<https://libguides.wustl.edu/our?p=302677#:~:text=A%20literature%20review%20is%20a,%2C%20and%20web%2Dbased%20resources>

•Children's Hospital of Philadelphia (CHOP). *Breastfeeding Tips for Beginners*. Retrieved from:
<https://www.chop.edu/centers-programs/breastfeeding-and-lactation-program/breastfeeding-tips-beginners#:~:text=The%20corners%20of%20the%20baby's,press%20inward%20on%20your%20breast>

•World Health Organization (WHO). *Exclusive Breastfeeding*. Retrieved from:
<https://www.who.int/tools/elena/interventions/exclusive-breastfeeding#:~:text=Exclusive%20breastfeeding%20means%20that%20the,of%20vitamins%2C%20minerals%20or%20medicines>

•Somaiya College of Nursing. *Research Publication*. Retrieved from:
<https://nursing.somaiya.edu.in/en/view-publication/360?type=research&id=730004>

•Food and Nutrition Journal. (2021). *Knowledge, Attitude and Practices of Breastfeeding among*
copyright: Scientific Journal