International Journal of Recent Advances in Multidisciplinary Topics
Volume 5, Issue 10, October 2024
https://www.ijramt.com | ISSN (Online): 2582-7839

A Comparative Study to Evaluate the Effectiveness of Self-Instructional Module on Knowledge Regarding Technique of Expression and Storage of Breast Milk Among Working Mothers Between Rural and Urban Areas at Bilaspur, Chhattisgarh

Shawana Lal*
M.Sc. Nursing, Department of Obstetrics & Gynaecological Nursing, Government College of Nursing, Bilaspur, Chhattisgarh, India

***Abstract*: Breast milk is a dream product to feed and immunize every human born on earth. No manufactured food can match with the content of breast milk and there is no such entity as breast milk substitute. Thus, it is a best gift a mother can give 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. So, by using self-instructional module regarding technique of expression & storage of breast milk which help for baby to protects him against infections and a major section of neonatal mortality and morbidity. Therefore, the investigator chose this topic i.e. "A comparative study to evaluate the effectiveness of self-instructional module on knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas at Bilaspur (C.G)". Objectives: 1) To assess the knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. 2) To compare the knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. 3) To evaluate the effectiveness of self-instructional module on knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. 4) To find out the association between level of pre test knowledge regarding technique of expression and storage of breast milk. Research hypothesis was that there will be significant difference in pre-test and post-test knowledge score regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. Comparative descriptive research design is used. Conceptual- framework is based on Health Belief Model. The tool were socio-demographic variables and self-structured questionnaire to assess the knowledge regarding technique of expression and storage of breast milk. An extensive review of literature was done. Content validity of the tool was ensured by verifying it with experts. Split half method was used for testing reliability of tool. The self-structured questionnaire was found reliable. A pilot study was conducted on 20 breast feeding working mothers in rural & urban areas. The main study was conducted in selected rural and urban areas at Bilaspur (C.G) and purposive sampling was done. Data collection was analyzed by an parametric 'Z' test which reveals that the pre test urban scores (X=54.84, S.D= 7.45) and post test urban (X=67.24, S.D=4.19) & pre test rural scores (X=27.42,S.D=10.48) and post test rural score (X=33.63,S.D=3.98) and obtained urban 'Z'= 15.6 and rural 'Z'= 10.3 which indicated that on applying the test calculated z test value was found to be 15.6 which was greater than 2. So, then the null hypothesis is rejected at all levels of significance (Z cal 15.6 > 2), so Ho is rejected. Hence H2 accepted i.e., There will be significant difference in pre-test and post-test knowledge score regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. Conclusion: The study concluded that the self-instructional module was effective in increasing the knowledge regarding technique of expression and storage of breast milk among working mothers.**

***Keywords*: Comparative, Effectiveness, Self-Instructional module, Knowledge, Expressed breast milk, Storage of breast milk.**

1. Introduction

The document starts here. Copy and paste the content in the paragraphs. Breast milk is a dream product to feed and immunize every human born on earth. No manufactured food can match with the content of breast milk and there is no such entity as breast milk substitute. Thus, it is a best gift a mother can give 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 storage of expressed breast milk for any considerable period of time is unavoidable in neonatal units and in many households, especially among working mothers who need to report back to work soon after delivery.

Breast milk is the best possible food for the baby and promotes babies physical and emotional growth to the fullest. The breast feeding should be initiated within an hour of birth

*Corresponding author: aashilal70249@gmail.com

instead of waiting several hours. Although milk at that time help to establish feeding and a close relationship known as "bonding".

Elizabeth, (2008) a study conducted at Canada, breastfeeding difficulties among employed that those who combined breast feeding and employment experience many difficulties. Among the 150 samples, 63 (42%) mothers had the problem of leaking milk.

Journal of Human Lactation, First published on November 12, 2009, a cohort study, Conducted in Perth (Australia), the expression of breast milk allows a mother to be away intermittently from her infant while continuing to breastfeed. The study to investigate between expression of breast milk and breast-feeding duration. Result: A total of 587 mother, or 55% of those eligible, participated in the study. Of these 93% were breastfeeding at discharge but after six month they discontinue as they started on their work.

A. Need for the Study

Breast milk is best food for baby, which protects him against infections, helps him to grow and develop during first years of life. Breastfeeding can prevent a major section of neonatal mortality and morbidity. It is the fundamental right of every child.

The report says that despite a reported 55 percent exclusive breastfeeding rate in children below the age of six months, the large population in India and high under five mortality means that an estimated 99,499 children die each year as a result of cases of diarrhoea and pneumonia that could have been prevented through early initiation of breastfeeding, exclusive breastfeeding for the first six months, and continued breastfeeding.

In today's world around 75% of women are working in urban area, out of which 58% are working mothers. In Indian, the maternity benefit is given for 180 days paid leave in Government setting but in private sectors the mother has to return back to work after one and half month or two months. Also, as per W.H.O rule exclusive breast feeding should be given at least for 6 months.

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. India has more than 400 million children. 2.5 million children die in India every year, accounting for one in five deaths in the world, with girls being 50 percent more likely to die. One out of 16 children die before they attain one year of age, and one out of 11 die before they attain five years of age. India accounts for 35 per cent of the developing world's low birth weight babies and 40percent of child malnutrition in developing countries, one of the highest levels in the world. Although India's neonatal mortality rate declined in the 1990s from 69 per 1000 live births in 1980 to 53 per 1000 live births in 1990, it remained static, dropping only four points from 48 to 44 per 1000 live births between 1995 and 2000.

Therefore, researcher decided to provide a self-instructional module on knowledge regarding technique of expression and storage of breast milk. This intern will help the working lactating mothers to develop their attitude and skills towards breast milk expression and will help them to follow healthy practices on expression and storage of breast milk

2. Methodology

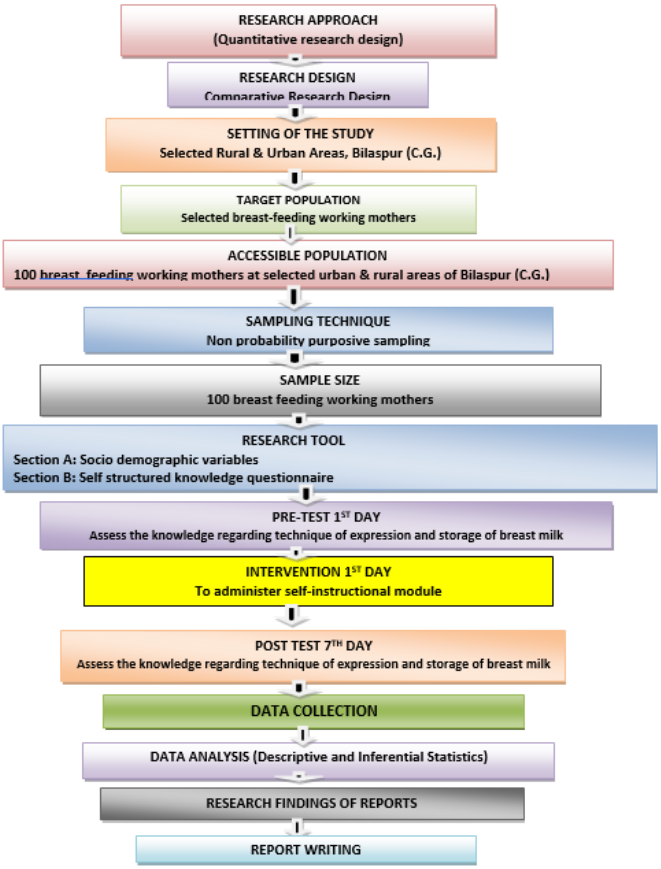

Fig. 1.

3. Result and Discussion

A. Presentation of Data Study

The data was organized under following section:

Section I: Distribution of subjects according to demographic variables using frequency and percentage.

Section II: Overall analysis of pretest and post-test knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas by using frequency and percentage

Section III: Comparison the knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas

Section IV: Effectiveness of self-instructional module on knowledge of pre-test and post-test regarding technique of expression and storage of breast milk among working mother between rural and urban areas

Section V: Chi-square analysis to find out association between pre-test level of knowledge regarding technique of expression and storage of breast milk among working mother with their selected socio-demographic variables.

4. Major Findings of the Study

The major findings of the study revealed that,

Section-I: Distribution of subjects according to demographic variables using frequency and percentage

Majority of subjects in rural areas 21(42%) belonged to age group 18-22years of age, 9 (18%) belonged to age group 23-27years of age,10(20%) belonged to age group 28-32years of age, and 10(20%) belonged to age group >32years of age, whereas in urban areas 10(20%) were belongs to age group 18-22years and >32years, 21(42%) were belongs to age group 23-27years of age, 9(18%) were belongs to 28-32years of age.

Majority of subjects in rural areas 21(42%) were having upto 10+12 education, 9(18%) were diploma and graduate or postgraduate., 11(22%) were illiterate, while in urban areas majority of subjects 21(42%) were having diploma and graduate, 11(22%) were postgraduate, 9(18%) were having upto 10+12 education and 9(18%) were illiterate.

Majority of subjects in rural areas 21(42%) were doing private job, 9(18%) were labourer or self-employed., 11(22%) were doing government job, while in urban areas majority of subjects 21(42%) were labourer,11(22%) were self-employed, 9(18%) were doing private job or government job.

Majority of subjects in rural areas 22(44%) were having income <Rs 10,000, 8(16%) were having income Rs 10,000-20,000, 10(20%) were having income Rs 20,000-30,000, 10(20%) were having income >Rs 30,000, while in urban areas majority of subjects 22(44%) were having income >Rs 30,000, 10(20%) were having income Rs 20,000-30,000 or <10,000, and 8(16%) were having income Rs 10,000-20,000.

Majority of subjects in rural areas 27(54%) were living in nuclear family and 33(66%) were living in joint family, while in urban areas 33(66%) were living in nuclear family and 27(54%) were living in joint family.

Majority of subjects in rural areas 22(44%) were having less than 6hours, 8(16%) were having 6-8 hours working, 10(20%) were having 8-10hours working, 10(20%) were having more than 10hours working, while in urban areas majority of subjects 22(44%) were having more than 10hours working, 10(20%) were having 8-10hours or less than 6hours working and 8(16%) were having 6-8hours working.

Majority of subjects in rural areas 33(66%) were not using top feeding and 17(34%) were using top feeding, while in urban areas 33(66%) were using top feeding and 17(34%) were not using top feeding.

Majority of subjects in rural areas 33(66%) were not using feeding utensils and 17(34%) were using feeding utensils, while in urban areas 33(66%) were using feeding utensils and 17(34%) were not using feeding utensils.

Majority of subjects in rural areas 33(66%) were not having information and 17(34%) were having information, while in urban areas majority of subjects 33(66%) were having information and 17(34%) were not having knowledge.

Objective 1: To assess the knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas.

Section – II: Assessment on knowledge regarding technique of expression and storage of breast milk

Assessment level of pre test knowledge regarding technique of expression and storage of breast milk among rural and urban areas in breast feeding working mother.

The knowledge score of rural & urban area regarding technique of expression and storage of breast milk. Out of 100 mothers. In urban areas 32(32%) were having very good knowledge, 11(11%) were having good knowledge, 7(7%) were having poor knowledge. In rural areas majority of mothers 23(23%) were having good knowledge, 14(14%) were having very good knowledge, 8(8%) were having poor knowledge, 5(5%) were having very poor knowledge.

Assessment level of post test knowledge regarding technique of expression and storage of breast milk among rural and urban areas in breast feeding working mother

The knowledge score of rural & urban area regarding technique of expression and storage of breast milk. Out of 100 mothers. In urban areas 42(42%) were having very good knowledge, 8(8%) were having good knowledge. In rural areas majority of mothers 46(46%) were having very good knowledge, 4(4%) were having good knowledge

5. Supportive Study

Debu Adhikari (2022), a descriptive cross-sectional study was conducted among 106 employed breastfeeding mothers study aimed to assess the knowledge and practice on expression and storage of breast milk among employed mothers attending B.P. Koirala institute of health sciences Nepal along the association with demographic variables and correlation between knowledge and practice. Data were collected using a semi-structured questionnaire through interview technique.

6. Results

Majority **(**72.6%) of the respondents were in the age group 20-29 years with mean age 27.55 and standard deviation of 4.30. The knowledge score in expression and storage of breast milk was found adequate in 46.2% of respondents with mean score 6.76 and standard deviation of 3.08. Practice was found appropriate in 39.6% of them with mean score 6.04 and standard deviation of 4.540. The correlation between knowledge and the practice was found positively statistically significant. with P value 0.01(r=0.469).

Section-III:

Objective 2: To compare the knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas

The comparison between the knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas. Parametric paired Z test has been used to find the significance of difference observed in mean knowledge score. On applying the test calculated z test value was found to be 15.6 which was greater than 2. So, then the null hypothesis is rejected at all levels of significance therefore H2 accepted. There is a significant difference between urban and rural score of mothers is 15.6S.

Section-IV:

Objective 3: To evaluate the effectiveness of self-

instructional module on knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas.

Effectiveness of self-instructional module on knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas

The effectiveness of self-instructional module on knowledge regarding technique of expression and storage of breast milk among working mothers between rural and urban areas. In urban area, mean difference of pre test and post test is 12.40, whereas in rural areas, mean difference of pre test and post test is 6.210.

Section-V:

Objective 4: To find out the association between knowledge regarding expression and storage of breast milk with selected demographic variables

Chi square analysis to find out the association between level of pre test knowledge regarding technique of expression and storage of breast milk among mothers of rural areas with their selected demographic variables.

The association between level of pre-test knowledge regarding technique of expression and storage of breast milk among mothers with their socio demographic characteristics such as age, educational status, occupational status, family income, type of family working hours, top feeding used, feeding utensil used, information etc., using a non-parametric $\chi 2$ test.

On applying the chi-square test demographic variable to find out the association between level of pre-test knowledge regarding technique of expression and storage of breast milk among mothers of rural areas with their selected demographic variables such as age (($\chi 2$=15.81, p>0.05), educational status ($\chi 2$=7.71, p>0.05), occupational status (8.90, p>0.05), family income ($\chi 2$=6.57, p>0.05), working hours ($\chi 2$=12.36, p>0.05),top feeding used ($\chi 2$=3.29, p>0.05), Information ($\chi 2$=3.29, p>0.05) were found to be statistically not significant at 0.05 level of significant.

Only "family income" was significantly associated between level of pre test knowledge regarding technique of expression and storage of breast milk among mothers of rural areas with their selected demographic variables with the $\chi 2$ value of family income was 24.6. greater than the table value (16.92) at 9 degree of freedom, Hence H3 i.e., there is a significant association between level of pre test knowledge regarding technique of expression and storage of breast milk among mothers of rural areas is accepted.

The association between level of pre-test knowledge regarding technique of expression and storage of breast milk among mothers with their socio demographic characteristics such as age, educational status, occupational status, family income, type of family working hours, top feeding used, feeding utensil used, information etc., using a non-parametric $\chi 2$ test.

On applying the chi-square test demographic variable to find out the association between level of pre-test knowledge regarding technique of expression and storage of breast milk among mothers of urban areas with their selected demographic variables such as age (($\chi 2$=6.57, p>0.05),educational status ($\chi 2$=4.88, p>0.05), occupational status ($\chi 2$=4.88, p>0.05), family income ($\chi 2$=6.57, p>0.05), working hours ($\chi 2$=6.88, p>0.05),top feeding used ($\chi 2$=2.75, p>0.05), Information ($\chi 2$=1.68, p>0.05) were found to be statistically not significant at 0.05 level of significant.

Only "feeding utensils used" was significantly associated between level of pre test knowledge regarding technique of expression and storage of breast milk among mothers of urban areas with their selected demographic variables with the $\chi 2$ value of feeding utensils used was 21.32. greater than the table value (7.82) at 3 degree of freedom, Hence H3 i.e., there is a significant association between level of pre test knowledge regarding technique of expression and storage of breast milk among mothers of urban areas is accepted.

7. Conclusion

Comparison between the knowledge regarding technique of expression and storage of breast milk among working mother between rural and urban areas. Parametric paired Z test has been used to find the significance of difference observed in mean knowledge score. On applying the test calculated z test value was found to be 15.6 which was greater than 2. So, then the null hypothesis is rejected at all levels of significance (Z cal 15.6 > 2), so Ho is rejected. Hence H2 i.e., There will be significant difference in pre-test and post-test knowledge score regarding technique of expression and storage of breast milk among working mothers between rural and urban areas is accepted.

References

[1] Abraham, (2001). "Paediatrics" (1st edition) Singapore: Mc. Grew Hill International company.

[2] Agunbiade, O.M. and Ogunleye, O.V., 2012. Constraints to exclusive breastfeeding practice among breastfeeding mothers in Southwest Nigeria: implications for scaling up. *International breastfeeding journal*, 7, pp. 1-10.

[3] Babak, I.M (2001). Essential of Maternity and Maternity Nursing Mosby company publications.

[4] Barbara, (2000). Pediatric Nursing. (7th edition). London: Balkier Dell Publications.

[5] Bannet, Myles, (1994). Text Book of Midwives. (20th edition). Ban press colour Books Publications.

[6] Cape, W., Faber, M. and Benade, S., 2007. Breastfeeding, complementary feeding and nutritional status of 6–12-month-old infants in rural KwaZulu-Natal. *South African Journal of Clinical Nutrition*, *20*(1), pp. 16-24.

[7] Dorothy, Marlow. R (1998). Text book of Pediatrics (16th edition). Philadelphia W.B. Saunders company publications

[8] Dutta, (2009). Pediatric Nursing. (2nd edition). New Delhi: Jaypee Publications.

[9] Demirtas, B., Ergocmen, B. and Taskin, L., 2012. Breastfeeding experiences of Turkish women. *Journal of Clinical Nursing*, *21*(7-8), pp. 1109-1118.

[10] Elizabeth, (2009). "Nutrition of child Development" (1st edition). Paramedical Publications.

[11] Ekambaram, M., Bhat, B. and Ahamed, M.A.P., 2010. Knowledge, attitude and practice of breastfeeding among postnatal mothers. *Current Pediatric Research*, *14*(2), pp.119-124.

[12] Maria, Hastings T. (2003). "Fundamentals of Nursing Research" (3rd edition). Boston Publications.

[13] Meharban Singh, (1999). "Care of Newborn" (3rd edition). New Delhi.

[14] Meharban Singh, (2003). "Clinical Methods". New Delhi: Sagar Publications.

[15] Movak S. C. (1995). "Maternal Child Health Nursing". St Lousis: Mosby Publications.
[16] Mete, S., Yenal, K. and Okumuş, H., 2010. An investigation into breastfeeding characteristics of mothers attending childbirth education classes. *Asian nursing research*, *4*(4), pp. 216-226.
[17] Neklson, (1998). "Textbook of paediatrics Nursing" (16st edition). Philadelphia: Harcourt International Publications.
[18] Nancy, Barns (1999). "An Introduction to Biostatistics a Manual for Students in Health Science" (3rd edition). ND Prentice Indian Publications.
[19] Panda, V.N. (2002). "Handbook of paediatrics" (1st edition). New Delhi: CBS Publications.
[20] Reada, S.S. (1983). "Maternity Nursing" (18th edition). Lippincott Publications.
[21] Staci, Nix 92005). "Basic Nutrition and Diet Therapy" (1st edition). Philadelphia: Elsevier Publications.
[22] Suraj Gupta, (1998). "Textbook of Essential Pediatric Nursing" (8th edition). New Delhi: Jaypee Brothers Publications.
[23] Wagle, C.S (1993). "Short Textbook of paediatrics" (1st edition). Bombay: Vorasa Medical publications.
[24] AIMS. (2006). Feeding of Normal and Low Birth Weight babies, Nightingale Nursing Times 6(2). 4-8.
[25] Ambedkar. N. et.al (1999). Use of Commercial feeding formula among urban Children in Nagpur. 24(1) 69-74.
[26] American Association of Pediatrics (1997), Breast Feeding and the use of health workers, pediatrics, 100, 103-109.
[27] Anita Malden (2001), Breast feeding by employed women's paediatrics, 73, pp. 644-648.
[28] Arinda Fernandez. (2006). Breast feeding. Prim's Nursing practice. 1(3). 111- 118.
[29] Arun Phatak (2010). The ten steps and baby friendly hospital initiative.
[30] Chalatte (2009). Expressed breast milk: Safety on hospital. American Journal of Nursing, 109(2), 54-55.
[31] Arnsberg, M.B. (2006). The effect of employment status on breast feeding in the United States.
[32] Bedair, R. F, et.al (2005). Stored expressed breast milk on alternative for working Egyptian mothers.
[33] Cindy. L, (2004). Expression of milk by manual massage, using breast pump.
[34] Dickson. (2004). Breast milkexpression in the work place.
[35] Garstien, (2003). Expression and storage of colostrum's with advice about skin to skin contact in the first 24 hours.