# ASSESSMENT OF FEEDING PRACTICE AMONG MOTHERS ATTENDING THE IMMUNIZATION CLINIC OF UCMS HOSPITAL, NEPAL: A CROSS-SECTIONAL STUDY

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## ABSTRACT

### INTRODUCTION

Practice of exclusive breast feeding has dramatically reduced infant mortality in developing countries due to the reduction of diarrhea and infectious diseases. We conducted a study to assess the feeding practices among mothers with children less than 12 months of age attending the immunization clinic of UCMS hospital, Nepal.

### MATERIAL AND METHODS

A hospital based cross sectional study was carried out in the immunization clinic of Pediatric department of UCMS, Nepal for a period of four months. Mothers having of child aged between 0=12 months were included in the study. Sample size was 372 which was based on the number of mothers visiting Pediatric OPD for immunization of their child of age group 0-12 months during the duration of the study. Mothers were interviewed by using a pre-validated structured questionnaire. Data was analyzed by using SPSS version-20 software and presented by descriptive statistics as frequency and percentages.

### RESULTS

Most of the children were above six months, 56.5% were of 7-12 months of age group. Exclusive breastfeeding was done in 48.4% children for first six months. Maximum population preferred hospital as their mode of delivery. 93.5% mothers opted for hospital as their place of delivery. About 23.4% mothers were illiterate. Night feeding was practiced by 96.2% mothers.

### CONCLUSION

Knowledge regarding the proper feeding practice is good in mothers. Breast feeding awareness must be spread among mothers by workshops and health education programs.

### KEY WORDS

Breast Feeding, Immunization, Vaccination.

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## INTRODUCTION

Practice of breast feeding on this earth dates back to more than million years. The value for breast milk is clearly shown in the oldest book "Charaka Samhita". The World Health Organization recommends the practice of exclusive breastfeeding of infants for the first six months after birth and to continue breastfeeding with supplementary diet up to two years or more.[1] It offers infants and young children complete nutrition, early protection against illness and promote growth and development of the baby.[2] Non-breast fed baby is 15 times more likely to get diarrhea and is three times more likely to get respiratory infection. Practice of exclusive breast feeding has dramatically reduced infant mortality in developing countries due to reduction in diarrhea and infectious diseases.[3] Breast feeding is nearly universal in Nepal and the median duration of breast-feeding is long (33 months). According to a published survey, a major barrier to successful in hospital breast-feeding is inconsistency in information and nursery practices related to breastfeeding management.[4] Human milk is the ideal nourishment for infants' survival, growth, and development. Particularly in unhygienic conditions, however, breast milk substitutes carry a high risk of infection and can be fatal in infants.[5] Feeding practice among mothers plays a crucial role in the proper development of an infant. Nepal is a low and middle income country. Studies focusing on the feeding status of babies aged less than six months have not been assessed adequately in the Western part of the country. Hence, this cross-sectional study was aimed to determine the feeding practices among mothers with children less than twelve months of age attending the immunization clinic of UCMS hospital, Nepal.

## MATERIAL AND METHODS

A hospital based cross sectional study was carried out in the immunization clinic of Pediatric department of UCMS, Nepal for a period of four months. Mothers of child aged 0-12 months were included in the study. Data collection was done from December 2020 to 28 March 2021. Informed verbal and written consent was obtained from the parents of the babies enrolled in the study. The study was approved by the Institute Review Committee (ref no UCMS/IRC/ 113/20). Sample size was collected by using convenient sampling. All mothers who were attending immunization clinic for vaccination of their child and had children less than 12 months of were included in the study. Sample size was 372 which was based on the number of mothers visited pediatric ward for immunization of their child of age group 0-12 months during the duration of the study. Pilot study was done on 5% volunteer mothers who have similar characteristics with study population. The data of the pilot study was not included in the study. After pilot study, some questions were modified. Mothers were asked to stay after vaccination of their infants to look for any untoward effects of vaccination. A written consent was taken from the mothers before starting the study. Mothers were interviewed by using a pre-validated structured questionnaire. Mothers were assessed on feeding practices followed by them with the help of questionnaire. Questionnaire consisted of demographic details of mothers and 13 questions regarding breastfeeding practices. The collected data was compiled in Microsoft excel. Data was analyzed by using SPSS version-20 software and presented by descriptive statistics as frequency and percentages.

All the mothers having children less than 12 months of age attending the immunization clinic of UCMS hospital, Nepal were included in the study, whereas all those who showed non-cooperative attitude or didn't give consent for participation in the study were excluded.

## RESULTS

A cross-sectional study was done on 372 mothers having children less than 12 months of age who were attending the immunization clinic of UCMS hospital, Nepal. Biological characteristics of children are shown in Table 1. 52.2% children were male and 47.8% were female. Most of the children were above 6 months. 56.5% were of 7-12 months of age group. Majority of study population belonged to middle/lower middle socio-economic status followed by lower/upper lower, upper/middle, lower and upper. 12.4% were of upper class and 15.1% were of lower class (Figure 1). Demographic details of mothers are shown in Table 2. Merely a small percentage of mothers i.e. 9.9% belonged to 35-44 years of age group and 54.8% were of 21-24 years. Maximum of mothers were of Hindu religion and minimum were of Christian, 44.6% were Muslims and 1.6% were Buddhist. In the present study, 52.7% were living in joint family. Mode of delivery was normal in 68.3% of mothers.

Maximum population preferred hospital as their mode of delivery. Among them 93.5% mothers opted for hospital as their place of delivery. 23.4% mothers were illiterate. Only 2.4% mothers were professor/honours and 24.5% were having primary school certificate. Only 28.8% were employed.71.2% were housewife.

Practices regarding breastfeeding followed by mothers are shown in Table 3. In 58.3% mothers breastfeeding was started after 1 hour of baby birth. 97.3% mothers gave colostrum to their child. Prelacteal feed was given in 57.3% children. Exclusive breastfeeding was done in 48.4% children for first 6 months. Night feeding was practiced by 96.2% mothers. 69.4% mothers informed their doctors about lactation status before obtaining prescription for drugs. About 57.5% mothers continued breastfeeding during their sickness as well. 68.3% mothers didn't give water to their child during first 6 months. Out of 31.7% mothers who gave water to their child during first 6 months, majority of them i.e. 19.9% gave during with some medication. Bottle feeding was practiced by 80.6% mothers. 22.3% mothers practiced Katori –spoon feeding. Formula feeding was given by 70.7% mothers. Only a small number of mothers (28.8%) mothers gave pacifiers to their child.

**Table 1.** Biological characteristics of children (n=372)

| Variable | | Number | Percentage |
|---|---|---|---|
| **1.Gender** | | | |
| | Male | 194 | 52.2 |
| | Female | 178 | 47.8 |
| **2. Age (in months)** | | | |
| | 0-6 | 162 | 43.5 |
| | 7-12 | 210 | 56.5 |

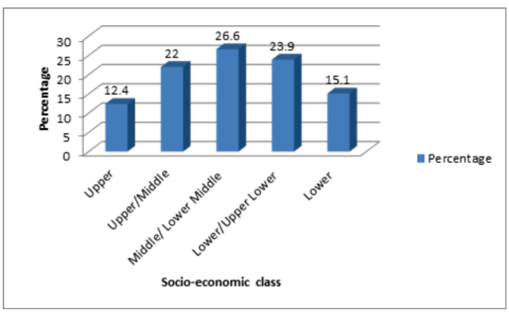


**Figure 1.** Distribution of study population on the basis of socio-economic status

**Table 2.** Socio-demographic profile of mothers

| Variable | Number | Percentage |
|---|---|---|
| **Age (in years)** | | |
| 21-24 | 204 | 54.8 |
| 25-34 | 131 | 35.3 |
| 35-44 | 37 | 9.9 |
| **Religion** | | |
| Hindu | 198 | 53.3 |
| Muslim | 166 | 44.6 |
| Christian | 2 | 0.5 |
| Buddhist | 6 | 1.6 |
| **Type of family** | | |
| Nuclear | 176 | 47.3 |
| Joint | 196 | 52.7 |
| **Mode of delivery** | | |
| Normal | 254 | 68.3 |
| Cessarian section | 118 | 31.7 |
| **Place of delivery** | | |
| Home | 24 | 6.5 |
| Hospital | 348 | 93.5 |
| **Education** | | |
| Illiterate | 87 | 23.4 |
| Primary school certificate | 91 | 24.5 |
| Middle school certificate | 51 | 13.7 |
| High school certificate | 23 | 6.2 |
| Intermediate/ Post high school diploma | 64 | 17.2 |
| Graduate/Postgraduate | 47 | 12.6 |

**Table 3.** Showing mothers' practices regarding breast feeding

| Questions | Number | Percentage |
|---|---|---|
| **1. Breast feeding was started** | | |
| a) Within 1 hour | 155 | 41.7 |
| b) After 1 hour | 217 | 58.3 |
| **2. Colostrum was given** | | |
| a) Yes | 362 | 97.3 |
| b) No | 10 | 2.7 |
| **3. Prelacteal feed was given** | | |
| a) Yes | 213 | 57.3 |
| b) No | 159 | 42.7 |
| **4. Exclusive breast feeding was done for first 6 months** | | |
| a) Yes | 180 | 48.4 |
| b) No | 192 | 51.6 |
| **5. Night Feeding Practiced** | 358 | 96.2 |
| a) Yes | | |
| b) No | 14 | 3.8 |
| **6. Do you inform doctors about lactation status before obtaining prescription for drugs.** | | |
| a) Yes | 258 | 69.4 |
| b) No | 114 | 30.6 |
| **7.Continuation of breastfeeding when mother is sick** | | |
| a) Yes | 214 | 57.5 |
| b) No | 158 | 42.5 |
| **8. Do you give water during first 6 months** | | |
| a) Yes | 118 | 31.7 |
| b) No | 254 | 68.3 |
| **9. If water is given, is it given?** | | |
| a) only during with some medications | 74 | 19.9 |
| b) Only during diarrhea and vomiting? | 36 | 9.7 |
| c) for feeding and thirst purpose | 8 | 2.1 |
| d) not given | 254 | 68.3 |
| **10. Bottle feeding done or not?** | | |
| a) Yes | 300 | 80.6 |
| b) No | 72 | 19.4 |
| **11. Katori –spoon feeding done or not?** | | |
| a) Yes | 83 | 22.3 |
| b) No | 289 | 77.7 |
| **12. Formula feeding given or not** | | |
| a) Yes | 263 | 70.7 |
| b) No | 109 | 29.3 |
| **13. Pacifiers given or not?** | | |
| a) Yes | 107 | 28.8 |
| b) No | 265 | 71.2 |

## DISCUSSION

A cross-sectional study was done on 372 mothers having children less than 12 months of age who were attending the immunization clinic of UCMS hospital, Nepal. In our study, 52.2% children were male and 47.8% were female. In a study done by Maiti A,[1] the male child was having a higher percentage (52.80%) of vaccination coverage than the female child. In our study most of the children were above 6 months. 56.5% were of 7-12 months of age group. In a study done by Chaudhary RN,[4] 77.5% of children were of 6-12 months of age. Majority of study population belonged to middle/lower middle socio-economic status followed by lower/upper lower, upper/middle, lower and upper. 12.4% were of upper class and 15.1% were of lower class. In a study done by Chakraborty N,[6] most of the children were of class 3 socio-economic status followed by 29.8% children belonging to class 5, 19.7% belonging to class 1 and 10.4% belonging to class 2 and class 4 socio-economic status each.

In our study, merely a small percentage of mothers i.e. 9.9% belonged to 35-44 years of age group and 54.8% were of 21-24 years. In a study done by Madhu K,[7] 60% of mothers were between 21 and 25 years of age. Maximum of mothers were of Hindu religion and minimum were of Christian. 44.6% were Muslims and 1.6% were Buddhist. In a study done by Chaudhary RN,[4] 98.0% were Hindu, 1.5% Muslim, Buddhist .5% and Christian 0 %. In our study, 52.7% were living in joint family. In a study done by Maiti A,[1] 59.1% of the mothers belonged to joint family. In our study, mode of delivery was normal in 68.3% of mothers. In a study done by Kumar S[3],40% Mode of delivery was normal. In our study, maximum population preferred hospital as their mode of delivery. 93.5% mothers opted for hospital as their place of delivery. In a study done by Maiti A[1], almost 93% deliveries were made at institutions. In our study, 23.4% mothers were illiterate. Only 2.4% mothers were professor/honours and 24.5% were having primary school certificate. In a study done by Singh S,[8] 11.89 mothers were illiterate and 22.38% were Graduate & Above. In our study, only 28.8% were employed.71.2% were housewife. In a study done by Alamirew MW,[5] 45.1% were housewives. In our study, 58.3% mothers started breastfeeding after 1 hour of baby birth. Breastfeeding within 1 hr and 24 hr was lower in study done by Kumar D[9] and Chatterjee S[10] where breastfeeding within 1 hour was only 6.3% and 14.54% and 32.6% within 24 hours and 23.3% as reported by Yadavannavar MC.[11] In a study done by Khan AM[12] in Delhi reported initiation of breast feeding within one hour of delivery was practiced by 37.2% mothers whereas it was only 13.6% in one study done by Sinhababu A[13] from West Bengal.

In our study, 97.3% mothers gave colostrum to their child. 81.6% colostrum acceptance reported by Parmer VR[14] and 35% as per study done by Wagh SV.[15] In another study 94% infants had received colostrums. In studies by Kumar S[3], Maiti A[1] and Alamu TO[16] colostrum feeding was observed in 40%, 74.83% and 94.5% children respectively. In our study, prelacteal feed was given in 57.3% children. In a study done by Divyarani DC[2] 57.6% of them were given prelacteal feed. Our study findings were differed from a study done by Kumar S[3] in New Delhi, where 90.9% mothers gave some pre lacteal feeds and a study done by Kulkarni RN[18] in urban Navi Mumbai where, 36.1% of mothers gave pre-lacteals. In Kumar D[9] study,done in urban slum of Chandigarh out of 270 mothers, 40% gave pre-lacteal feeds. In a study done by Dakshayani B,[19] in Mysore, study done among Hakkipikkis tribal population, 40% of them gave pre lacteals. In a study done by Surva Pathi S,[20] in rural area of Orissa, 56.4% of babies had received pre-lacteal feeds. Only 15.2% infants received pre-lacteals in a study done by Sreeramareddy CT[21] in Nepal. According to NDHS 2006, prelacteal feed is more in terai where 2 in 3 children receive them.[17] Exclusive breastfeeding was done in 48.4% children for first 6 months in our study. As per the study of Pathi S[20] in Orissa, only 8.6% mothers practiced EBF whereas, according to a study by Benjamin AI[22] at Punjab and Aggarwal A[23] at Delhi, it was 57.7% and 63.50% respectively. In a study from Vellore found exclusive breast feeding was done only in 11.4% of children under 6 months[24] whereas in a study done by Mahmood SE,[25] the prevalence of exclusive breast feeding to be 75%.

In our study, 57.5% mothers continued breastfeeding during their sickness as well. In a study done by Divyarani DC,[2] 50% mothers continued breastfeeding during their sickness. In our study, night feeding was practiced by 96.2% mothers. In a study done by Chaudhary RN,[4]15% of the mothers knew the importance of night feed but while coming to practice they were doing well. 90% mothers were practicing night feed. This was due to baby's demand even at night. In our study, 69.4% mothers informed their doctors about lactation status before obtaining prescription for drugs. In a study done by Divyarani DC,[2] 71% mothers informed doctors about lactation status before obtaining prescription for drugs. In our study, 68.3% mothers didn't give water to their child during first 6 months. In a study done by Divyarani DC,[2] 85% mothers gave water during first 6 months. Limitation of the study was as we used convenient sampling technique, the generalization of results will be difficult.

## CONCLUSION

Knowledge regarding the proper feeding practice is good in the mothers, but still it can be improved. Proper education programs are the need of the hour for enhancing the quality and quantity of breast feeding. The importance of exclusive breast feeding, colostrums, night feeding etc should be provided to mothers. Since health care workers and doctors can influence this commitment, their positive attitude and knowledge is crucial in the prenatal period. Breast feeding awareness must be spreaded by workshops and health education programs.

## CONFLICT OF INTEREST

None

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