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Original Research Article

Knowledge and practices of selected infant and young child nutrition (IYCN) practices among lactating mothers residing in urban slums of Vadodara, Gujarat

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ABSTRACT

Background: Age appropriate optimal Infant and young child nutrition is one of the a main strategy to improve under nutrition in children. Sub optimal Infant and Young Child Nutrition (IYCN) practices need to be strengthen in rural, tribal and urban mothers.

Objective: The present study was planned to assess the Knowledge and practices of lactating mothers on selected Infant and Young Child Nutrition (IYCN) practice

Materials and Methods : This study was conducted from November 2022 to February 2023. There were 34 UHC (Urban Health Centre) in the area of Urban Vadodara. One UHC was selected purposively. Informed verbal and written consent were obtained from hundred mothers before data collection. Knowledge and practices on selected IYCN practices was collected using pre tested semi structured questionnaire. Total 100 mothers were interviewed.

Results: 60% mothers were having knowledge regarding early initiation of breastfeeding but only 53% followed the correct practices. 61% of mothers were having knowledge regarding colostrum but only 58% followed correct practice. 82% mothers reported to have knowledge regarding pre lacteal but only 73% were following the correct practice. 60% knew that infant should be breastfed exclusively for 6 months but only 44% followed correct practices.

Conclusion: Infant and Young Child nutrition (IYCN) practices were found to be suboptimal. There is a need to sensitize young mothers for timely and optimal IYCN practices through various counselling strategies in government programmes.

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1. Background

Optimal breastfeeding affects children's nutrition and health.^{1,2} The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recommend early initiation of breastfeeding (i.e., providing breast milk to infants within one hour after birth), exclusive breastfeeding (i.e., feeding the child with breast milk only, but not anything else. However, the child is also to receive oral rehydration solution, drops, or vitamins / minerals

/ medicines syrups) during the first six months of life, introduction of complementary foods at six months, and continuing breastfeeding up to two years and beyond.³ Until 2020, however, only 44% of infants on the globe were breastfed exclusively within six months, 48% were breastfed within the first hour after birth, 69% were breastfed at one year of age, and 69% of infants 6–8 months of age were introduced to solid, semi-solid or soft foods.⁴

Globally, improved breastfeeding practices have the potential to save the lives of over 823,000 children under 5 years old every year.⁵ Exclusively breastfeeding infants for the first six months of their life is known to be the best

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start for a baby and a more widespread adoption of exclusive breastfeeding (EBF) would lead to the largest infant mortality reduction.¹ It can contribute towards meeting Sustainable Development Goals (SDG) 2 and 3—targets on nutrition and health—as well as being linked to many other SDGs. Since 1990, the World Health Organization (WHO) recommends that all newborn babies are exclusively breastfed for the first six months of their lives and continue to be breastfed for up to two years. Currently, 44% of infants under 6 months are being exclusively breastfed and just 35 countries are on target for exclusive breastfeeding.⁶ Breastfeeding rates are both supported and hindered by the social determinants of health and multi-level support is needed, including at policy, health systems and services level, targeting communities and families.^{7,8}

Breastfeeding is recognized as an important public health issue with enormous social and economic implications. Infants who do not receive breast milk are likely to experience poorer health outcomes than breastfed infants; mothers who do not breastfeed increase their own health risks.^{9,10}

Breastfeeding has proven health benefits for both mothers and babies in high-income and low-income settings alike. Yet, less than 50% of babies worldwide are breastfed according to WHO recommendations.^{11,12}

2. Objective

To assess the Knowledge and practices of lactating mothers on selected IYCN practices.

3. Materials and Methods

3.1. Ethical clearance

The study was approved by the Institutional Ethics Committee for Human Research (IECHR), Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda. The study has been allotted ethical approval number *IECHR/FCSc/MSc/2022/34*.

This study was conducted from November 2022 to February 2023. There were 34 UHC (Urban Health Centre) in the area of Urban Vadodara. One UHC was selected purposively. Informed verbal and written consent were obtained from hundred mothers before data collection. Knowledge and practices on selected IYCN practices was collected using pre tested semi structured questionnaire. Total 100 mothers were interviewed.

4. Results

Knowledge of mothers on selected IYCN practices is presented in Table 1. It was found that majority of mothers, 60% reported that initiation of breast milk should be done within one hour of birth. 61% of mothers were aware about colostrum and its importance. Majority of mothers that is

73% of mothers opined not to give pre-lacteals. 75% of women knew that infant should breastfed exclusively for first 6 months. Mothers did not know about most important indicator of adequacy of breast milk i.e., frequency of urination by the child.

Knowledge about IYCN was found to be good so practices of IYCN was also collected. It was found that 61% of women did early initiation of breastfeeding. 75% of mothers fed colostrum to their baby. 47% of mothers were facing difficulties during breastfeeding. 28% were suffering from sore nipples, 4% were suffering from engorgement, 19% were suffering from redness on breast, 39% were suffering pain during breastfeeding.

Table 1: Knowledge of selected infant and young child nutrition of lactating mothers

| Particulars | N | % | |
|---|-------------------------|-----|-------|
| Initiation of breast milk to the baby | Immediately after birth | 29 | 29 |
| | Within 1 hour | 62 | 62 |
| | Don't know | 9 | 9 |
| Awareness about colostrum | Total | 100 | 100 |
| | Yes | 61 | 61 |
| | No | 39 | 39 |
| Importance of colostrum | Total | 100 | 100 |
| | Good for the baby | 26 | 38.80 |
| | Provides energy | 27 | 40.29 |
| Pre lacteals given to the child | Increases immunity | 11 | 16.41 |
| | Don't know | 3 | 4.47 |
| | Yes | 27 | 27 |
| How long infant should be breastfed exclusively | No | 73 | 73 |
| | Total | 100 | 100 |
| | Till 6 months | 75 | 75 |
| Indication of infant's getting enough milk | 4-6 months | 25 | 25 |
| | Total | 100 | 100 |
| | Baby stops suckling | 77 | 77 |
| Total | Urinates (6-8 times) | 1 | 1 |
| | Don't know | 22 | 22 |
| | Total | 100 | 100 |

After eliciting knowledge regarding IYCN, their practices were also asked. It is presented in Table 2. Early initiation of breast feeding was done by only 53% of the mothers. Prelacteals were given by 27% of the mothers. Colostrum was fed by 75% of the mothers. p

It was thought interesting to present graphically their knowledge versus practice and is presented in Figure 1. As you can see from Figure 1 figure 1 60% mothers were having knowledge regarding early initiation of breastfeeding but only 53% followed the correct practices. 61% of mothers were having knowledge regarding colostrum but only 58% followed correct practice. 82% mothers reported to have knowledge regarding pre lacteal

Table 2: IYCN practices followed by lactating mothers (0-6 months)

| Particulars | | N | % |
|---|------------------------------|-----|-------|
| Early initiation of breastfeeding within 1 hour | Yes | 52 | 53.6 |
| | No | 45 | 46.4 |
| | Total | 97 | 100 |
| Colostrum fed to the baby | Yes | 73 | 75.25 |
| | No | 18 | 18.55 |
| | Don't know | 6 | 6.2 |
| Pre lacteals | Total | 97 | 100 |
| | Yes | 27 | 27 |
| | No | 73 | 73 |
| Which pre lacteals was given (N=27) | Total | 100 | 100 |
| | Animal milk | 13 | 48.14 |
| | Gutti | 4 | 14.81 |
| | Dal water | 2 | 7.4 |
| | Water | 3 | 11.11 |
| Presently breastfeeding your child | Ghee | 5 | 18.51 |
| | Yes | 97 | 97 |
| | No | 3 | 3 |
| | Total | 100 | 100 |
| | Animal milk | 3 | 17.64 |
| Beside breast milk what you have given to the infant | Gutti | 4 | 23.52 |
| | Dal water | 2 | 11.76 |
| | Water | 3 | 17.64 |
| | ghee | 5 | 29.41 |
| | Total | 17 | 100 |
| | 2-3 times | 10 | 10.30 |
| Frequency of breastfeeding during day time (N=97) | 4-6 times | 37 | 38.14 |
| | 7-9 times | 30 | 30.92 |
| | 10-12 times | 12 | 12.37 |
| | More than 12 times | 8 | 8.24 |
| | Total | 97 | 100 |
| | 2-3 times | 31 | 31.95 |
| Frequency of breastfeeding during night time (N=97) | 4-6 times | 50 | 51.54 |
| | 7-9 times | 11 | 11.34 |
| | 10-12 times | 5 | 5.16 |
| | Total | 97 | 100 |
| | 2-3 times | 2 | 2 |
| | 4-5 times | 5 | 5 |
| Urination of child during the day | 7-8 times | 42 | 42 |
| | 10-12 times | 44 | 44 |
| | >12 times | 7 | 7 |
| | Total | 100 | 100 |
| Difficulty during breastfeeding | Yes | 46 | 47.43 |
| | No | 51 | 52.57 |
| | Total | 97 | 100 |
| | Sore nipples | 13 | 28.26 |
| If yes, what | Engorgement | 2 | 4.34 |
| | Redness of breast | 9 | 19.56 |
| | Pain during breastfeeding | 18 | 39.13 |
| | Milk not coming | 4 | 8.6 |
| | Total | 46 | 100 |
| Whom you visit when facing problem during breastfeeding | Government hospital | 8 | 17.4 |
| | Private hospital | 10 | 21.7 |
| | Elderly female in the family | 23 | 50 |
| | No one | 5 | 10.9 |
| Do you clean your breast before and after breastfeeding | Total | 46 | 100 |
| | Yes | 93 | 95.9 |
| | No | 4 | 4.1 |
| With what you clean your breast | Total | 97 | 100 |
| | Water | 88 | 94.6 |
| | Soup and water | 5 | 5.4 |
| | Total | 93 | 100 |

but only 73% were following the correct practice. 60% knew that infant should be breastfed exclusively for 6 months but only 44% followed correct practices. So IYCN practices were found to be sub optimal.

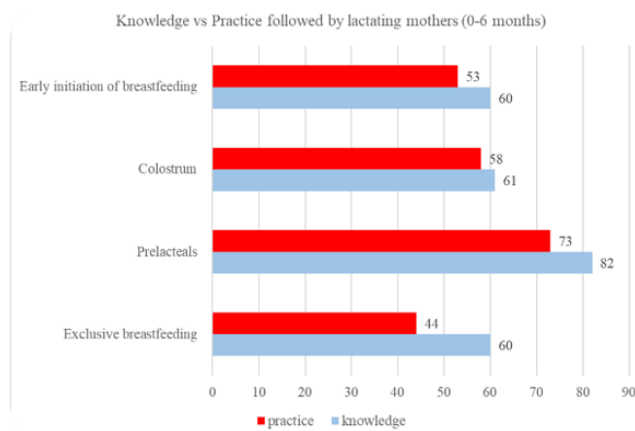


Fig. 1: Knowledge vs practice followed by lactating mothers(0-6 months)

Assessment for position, attachment and suckling was examined.

Observation was carried out using IMNCI checklist to assess position, attachment and suckling practice by the lactating mothers. Observation data presented in Table 3.

81.4% of mothers kept infant head and body straight. 32.9% of mothers follow the criteria of infant facing the mother's breast with nose opposite to the nipple. Only 34.02% of mothers supports infant's whole body. With regard to position classification Only 18.6% of mothers were in the criteria for good positioning. majority of the mothers were not following proper breastfeeding positioning. With regard to latching practices, Chin touching breast criteria is followed by 72.2% of the mothers. Mouth wide open criteria is followed by 53.6% of mothers. Lower lip turned outward criteria is followed by 22.7% of the mothers. More areola visible above then below the mouth criteria is followed by 18.6% of the mothers. Only 18.6% of mothers were having good attachment criteria.

5. Discussion

In the present study knowledge about IYCN was found to be good so practices of IYCN was also collected. It was found that 61% of women did early initiation of breastfeeding. 75% of mothers fed colostrum to their baby. 47% of mothers were facing difficulties during breastfeeding. 47% of mothers were facing difficulty during breastfeeding. 28% were suffering from sore nipples, 4% were suffering from engorgement, 19% were suffering from redness on breast, 39% were suffering pain during breastfeeding. 73% of mothers did not give pre lacteals to their baby.

Table 3: Assessment of breastfeeding technique as per integrated management of neonatal and childhood illness guidelines(N = 97)

| Variables (n = 97) | No. | % |
|--|-----|-------|
| Pre-sensitization | | |
| Assessment for position | | |
| Infant head and body straight | 79 | 81.4 |
| Infant facing the mother's breast with nose opposite to the nipple | 32 | 32.9 |
| Mother supporting infant's whole body | 33 | 34.02 |
| Position classification | | |
| Good position | 18 | 18.6 |
| Not well position | 72 | 74.2 |
| Not well position at all | 7 | 7.1 |
| Assessment for latching | | |
| Chin touching breast | 70 | 72.2 |
| Mouth wide open | 52 | 53.6 |
| Lower lip turned outward | 22 | 22.7 |
| More areola visible above than below the mouth | 18 | 18.6 |
| Attachment classification | | |
| Good attachment | 18 | 18.6 |
| Not well attached | 64 | 65.97 |
| No attachment at all | 15 | 15.5 |
| Assessment of effective suckling | | |
| Suckling effectively | 19 | 19.6 |
| Not suckling effectively | 78 | 80.4 |

Prajapati et al (2022) study found that the major source of information regarding breastfeeding technique was doctors (57%) followed by mothers (16%). Haider et al. found that major providers of infant feeding information were grandmothers (28%). Present study had also similar findings.¹³

Davra et al. Studied that the infant needs to be breastfed at least 8 – 12 times in 24 hours. When they enquired about the frequency of breastfeeding to the mothers had given day time breastfeeding for more than 8 times. Night time breastfeeding is important to prevent hypoglycaemia in the child and for the weight gain. Very few studies in India, have reported the frequency of breastfeeding in 24 hours. A study done by Noor et al in urban slums of Rourkela, reports that frequency of feeding was more than 8 times in 54% of the mothers.¹⁴

Davra et al. study found that gender of the child (male) was found to be significantly associated with EBF on multivariate analysis indicating that the odds EBF was twice in male child as compared to female child. This finding was directly highlights one of the important social issues of gender inequality. Moreover, odds of EBF were almost 3 times higher among mothers who received information about breastfeeding as compared to those who did not receive any such prior information. This indicates that information by health care providers about EBF during antenatal and post-natal care is likely to improve feeding

practices of the mothers. Similar study finding was observed in a study done by Sanghore et al., showing significant association between EBF and predictors like counselling by health care providers.

6. Conclusion

IYCN practicers were found to be suboptimal. There is a need to sensitize young mothers for timely and optimal IYCN practices through various counselling strategies in government programmes.^{15–17}

7. Source of Funding

None.

8. Conflict of Interest

None.

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