

Knowledge and Practice Regarding Breastfeeding Among Mothers Attending Immunization Clinic in Nepalgunj Medical College Teaching Hospital

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ABSTRACT

Background: Breastfeeding has been accepted as the most vital intervention for reducing infant mortality and ensuring optimal growth and development of children. The current study aimed to assess the knowledge and practice regarding breastfeeding among mothers attending immunization clinic. **Methods:** A cross sectional study was mothers having children under 1 year of age, who attended their children for vaccination and for the treatment of other minor illnesses. The purposive sampling technique was used for selecting the study subjects. Information regarding patients' demographics, knowledge and practice towards breastfeeding were collected from these mothers on a pre-designed and pretested questionnaire. **Results:** A total of 208 women with children between 6 months and 12 months were included in the study. Their age ranged between 18 and 37 years with the mean of 24.9±4.1. Overall mother's breastfeeding knowledge was good among 35% and excellent among 22% of them while it was unsatisfactory among 43% of the mothers. Breastfeeding in the first 6 months was practiced by 42% of the participated mothers. Only 23% practiced exclusive breast feeding. Among those who breastfed their babies, 51% initiated breastfeeding in the first hour of birth, 21% between 2-4 hours and only 20% initiated it after 24 hours. Only 73% of mother had not given any prelacteal feeding to their babies. No enough breast milk (47.9%), crying hungry (31.5%), work-related problems (13.7%) & mothers' illness (6.8%) were the commonly reported barriers against exclusive breastfeeding. **Conclusion:** The prevalence of EBF for up to 6 months of age was still low as per WHO recommendations. The mother's perception of "insufficient breast milk" was also the main reason for introducing other foods. Optimal breastfeeding promotion campaigns need to be carried out within the existing health care system such as the antenatal, after delivery and vaccination clinics.

Key words: Breastfeeding, exclusive, prevalence, knowledge, practice

INTRODUCTION

Good infant feeding and healthcare are critical for growth and development of children in the first few years of life¹. Optimal infant feeding practice recommended by World Health Organization (WHO) and United Nations Children's Fund involves early initiation of breastfeeding within 1 hour of birth; exclusive breastfeeding for the first 6 months of life; and the introduction of nutritionally-adequate and safe complementary (solid) foods at 6 months together with continued breastfeeding up to 2 years of age or beyond².

Breastfeeding has been accepted as the most vital intervention for reducing infant mortality and ensuring optimal growth and development of children³. About 800 000 children's lives could be saved every year among children under 5, if all children 0–23 months were optimally breastfed⁴. Breastfeeding is the ideal method suited for the physiological and psychological needs of

an infant⁵. Poor breastfeeding practices are widespread. It is estimated that sub-optimal breastfeeding, especially non-exclusive breastfeeding in the first 6 months of life, results in 1.4 million deaths and 10% of the disease burden in children younger than 5 years of age⁶. Reviews of studies from developing countries show that infants who are not breastfed are 6 to 10 times more likely to die in the first months of life than infants who are breastfed^{7,8}.

The key to successful breastfeeding is Information, Education and Communication strategies aimed at behavior change. For such a promotional campaign to be effective, attitudes and practices of health providers must be improved⁹. Exclusive breastfeeding stands out as the single most effective intervention for child survival¹⁰. Universalizing early (within one hour) and exclusive breastfeeding for 6 months, is viewed as a major public health intervention to reduce the child mortality, particularly, in the neonates and infants^{11,12}.

A study done in Australia found that the level of basic breastfeeding knowledge of Australian midwives was adequate but there are deficits in key areas. They noted that knowledge variations by midwives may contribute to conflicting advice experienced by breast-feeding women¹³.

Factors that are positively associated with breastfeeding at six months included a very strong desire to breastfeed, having

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been breastfed oneself as a baby, and being older. On the other hand, factors that are negatively associated included a woman having no intention to breastfeed for six months or more, baby receiving formula while in hospital, smoking 20 or more cigarettes per day before pregnancy, not attending childbirth education sessions, and having self-reported anxiety or depression which was a problem in the six months after birth¹⁴. Interventions that seek to increase breastfeeding should consider focusing on women who are most at risk of early discontinuation of breastfeeding. Lack of knowledge, non-supportive behaviours and attitudes of maternity nurses, inconsistent advice, and minimal prenatal encouragement to breastfeed have been cited as barriers to breastfeeding¹⁵. Some nurses and physicians are less than supportive of breastfeeding and tend to encourage mothers to supplement with formula or to give up altogether if they experience difficulties with breastfeeding¹⁶.

Another study noted that, across disciplines, inadequate professional support for breastfeeding has been identified in the literature. They also stated that: "The adequacy of health professionals' performance in the promotion of breastfeeding has been questioned repeatedly"¹⁷. Physicians have significant educational needs in the area of breastfeeding management¹⁸. Breastfeeding offers numerous health advantages to children, mothers, families, and society. The American Academy of Pediatrics calls for enthusiastic support and involvement of paediatricians in the promotion and practice of breastfeeding.

The mean total duration of breastfeeding in Nepal, like most other low and middle income countries, is long and usually more than two years¹⁹, but data on EBF up to six months of age as well as continuous breast feeding practices are scarce. Information on breastfeeding practices and the factors influencing them is important for successful campaigns. Hence, we undertook cross-sectional survey in an immunization clinic of tertiary hospital, Kohalpur, Nepal. The current study aimed to assess the knowledge and practice regarding breastfeeding among mothers attending immunization clinic.

MATERIAL AND METHODS

A cross sectional study was carried out in immunization clinic which runs once a week on Nepalgunj Medical College Teaching Hospital, Kohalpur, Banke, Nepal between August 2014 to December 2014. The study subjects were mothers having children aged under 1 year of age, who attended their children for vaccination and for the treatment of other minor illnesses. The purposive sampling technique was used for collecting to select the study subjects. Information regarding patients' demographics, knowledge and practice towards breastfeeding were collected from these mothers on a pre-designed and pretested questionnaire²⁰.

It comprised 3 parts: Sociodemographic characteristics, knowledge about breast feeding and breast feeding practices.

Knowledge on breastfeeding included 38 items, covering the following scopes of knowledge on breastfeeding: general knowledge, colostrum, advantages to mothers and babies, effective feeding method, duration of feeding, complementary feeding, problems with breastfeeding. Each item had categorical responses of yes, no, or do not know. A correct response will be scored as '1', whereas a wrong or do not know response will be scored as '0'. Total knowledge score ranged from 0 to 38, with higher scores indicating more knowledge. Knowledge of mothers whose scores are less than 50% (i.e., <19) were considered as "unsatisfactory", 50% to <75% (i.e., 19-28) as "good", while mothers' knowledge scores 75% or more (i.e., 29-38) were considered as "excellent". Breast feeding practices were assessed with initiation of breastfeeding, colostrum feeding, prelacteal feeding and exclusive breastfeeding upto six months of age or not. Before collecting the information, permission was taken from the institute authority and verbal consent was taken from the respondents. The data was entered in SPSS 17 software package and analyzed.

RESULTS

Baseline characteristics of respondents

A total of 208 women, with children aged between 6 months and 12 months, attending immunization clinic were included in the study. Their sociodemographic characteristics were presented in Table I. Age of the women ranged between 18 and 37 with the mean of 24.9±4.1. Early marriage was done by 68.3% of them with 38% teenage pregnancy. 40.9% of the respondents came from rural area. Only 70% of the respondents live in their own house. Although 54% of the respondents completed their higher secondary level of education, 3/4th of them were housewife.

Table II depicts the children information. Almost 3/4th of the children were male, 53.4% less than 9 months with 96% hospital delivery.

Breastfeeding Knowledge

Advice regarding breastfeeding was received by almost 73% of the women participated in the study. Table 3 shows that majority of the women (67.3%) were aware of the benefits of breastfeeding for reducing the frequency of diarrhoea. However they had unsatisfactory knowledge regarding other benefits to babies. Regarding benefits to mothers majority 87% were aware that mother who practiced breastfeeding had a low risk of getting breast cancer, prevent breast engorgement (72%), helps achieving pre-pregnancy weight faster. Only 23% were knowing that exclusive breastfeeding is beneficial in spacing birth. It is evident that the knowledge of participated mother regarding colostrums is insufficient except its definition where 72% of them properly answered that it is the mother's early milk which was thick, sticky and yellowish in colour.

| Socio demographic Data | | Frequency | Percentage |
|-------------------------|----------------------|-----------|------------|
| Age(years) | <20 | 12 | 5.8 |
| | 20-30 | 181 | 87 |
| | >30 | 15 | 7.2 |
| Mean± SD | 24.9 ± 4.1 | | |
| Age at marriage (years) | <20 | 142 | 68.3 |
| | >=20 | 66 | 31.7 |
| Age at first child | <20 | 79 | 38 |
| | >=20 | 129 | 62 |
| Address | Rural | 85 | 40.9 |
| | Urban | 111 | 53.4 |
| Residence | Own house | 145 | 69.7 |
| | Rent | 63 | 30.3 |
| Living in joint family | Yes | 94 | 45.2 |
| | No | 114 | 54.8 |
| Education | Illiterate | 21 | 10.1 |
| | Primary | 17 | 8.2 |
| | Secondary | 56 | 26.9 |
| | Higher sec and above | 114 | 54.8 |
| Husband's education | Illiterate | 2 | 1 |
| | Primary | 27 | 13 |
| | Secondary | 54 | 26 |
| | Higher sec and above | 125 | 60.1 |
| Occupation | Housewife | 158 | 76 |
| | Governmental | 15 | 7.2 |
| | Private | 35 | 16.8 |
| Husband's occupation | Governmental | 39 | 18.8 |
| | Private | 163 | 73.6 |
| | No work | 16 | 7.7 |

Table I: Sociodemographic characteristics of respondents (n=208)

| Characteristics of data | | Frequency | Percentage |
|-------------------------|----------|-----------|------------|
| Sex | Male | 155 | 74.5 |
| | Female | 53 | 25.5 |
| Age in months | <9 | 111 | 53.4 |
| | >=9 | 97 | 46.6 |
| Place of delivery | Hospital | 199 | 95.7 |
| | Home | 9 | 4.3 |

Table II: Characteristics of children (n=208)

| Statement | Correct answer | |
|--|----------------|-------|
| | n | % |
| Benefits to babies | | |
| 1. Breastfeeding reduces the risk of respiratory infection | 102 | 49.04 |
| 2. Breastfeeding increases the baby's intelligence | 88 | 42.31 |
| 3. Breastfeeding helps to reduce the incidence of child abuse and neglect | 95 | 45.67 |
| 4. Baby who received breastfeeding is less prone to get diarrhea | 140 | 67.31 |
| 5. Breast milk provides baby with more protection from allergy compared to formula milk | 80 | 38.46 |
| 6. Breastfeeding causes good development of baby's teeth and gum | 100 | 48.08 |
| Benefits to mothers | | |
| 1. Exclusive breastfeeding is beneficial in spacing birth | 55 | 26.44 |
| 2. Breastfeeding helps to stimulate uterine contraction | 70 | 33.65 |
| 3. Mothers who practiced breastfeeding may achieve pre-pregnancy weight faster | 120 | 57.69 |
| 4. Frequent breastfeeding may prevent breast engorgement | 150 | 72.12 |
| 5. Mother who practiced breastfeeding has a low risk of getting breast cancer | 181 | 87.02 |
| 6. Breastfeeding may protect against osteoporosis | 77 | 37.02 |
| Colostrum | | |
| 1. Colostrum is the mother's early milk, which is thick, sticky, and yellowish in colour | 150 | 72.12 |
| 2. Colostrum is difficult to digest and needs to be discarded | 80 | 38.46 |
| 3. Colostrum causes constipation among babies | 73 | 35.10 |
| 4. Colostrum is not able to protect babies from jaundice | 80 | 38.46 |
| Effective feeding | | |
| 1. Baby will gain weight if they receive effective feeding | 122 | 58.65 |
| 2. Correct positioning helps to achieve effective feeding | 112 | 53.85 |
| 3. Babies sleep well after they receive adequate breastfeeding | 190 | 91.35 |
| Duration of feeding | | |
| 1. Breastfeeding should be initiated within 30 minutes after deliver | 155 | 74.52 |
| 2. Breastfeeding should be on demand | 160 | 76.92 |
| 3. Baby should be allowed to breastfeed for at least 10-20 minutes for each feeding | 79 | 37.98 |
| 4. Breastfeeding should be continued upto 2 years even though the baby has received complementary food | 180 | 86.54 |
| Complementary feeding | | |
| | | 0.00 |
| 1. Complementary feeding should be introduced at 6months of age | 180 | 86.54 |
| 2. Mothers may mix breastfeeding and formula feeding once baby starts taking complementary food | 190 | 91.35 |
| Problems | | |
| 1. Breast milk production is influenced by breast size | 112 | 53.85 |
| 2. Mothers will inverted nipples cannot breastfeed their babies | 130 | 62.50 |
| 3. Breastfeeding must be discontinued if mother has cracked nipple | 101 | 48.56 |
| 4. Breastfeeding must be discontinued if baby has jaundice | 110 | 52.88 |
| 5. Breastfeeding must be discontinued if mother has breast engorgement | 80 | 38.46 |
| 6. Breast engorgement may be reduced with cold packs | 120 | 57.69 |
| Practical aspects | | |
| | 0.00 | |
| 1. Exclusive breastfeeding must be practices until infant is 6 months old | 190 | 91.35 |
| 2. Massage may reduce breast engorgement | 100 | 48.08 |
| 3. Giving water to baby is encouraged after every breastfeeding | 120 | 57.69 |
| 4. Belching after feeding shows that the baby is full | 190 | 91.35 |
| 5. Babies who get enough feeding will pass urine more frequently | 112 | 53.85 |
| 6. Oral thrush frequently happens to babies who breastfeed | 95 | 45.67 |

Table III: Knowledge regarding breastfeeding among participants (n=208)

In addition, table III shows that knowledge of mothers regarding effective breastfeeding is excellent (91%) regarding babies sleeps well after receiving adequate breastfeeding. Their knowledge is sufficient regarding duration of breastfeeding (ranging from 74.5% to 84.5%) except for the fact that baby should be allowed to breastfeed for at least 10-20 minutes for each feeding. Their knowledge regarding complementary feeding was sufficient as 91.4% recognized that they may mix breastfeeding and formula feeding once baby starts taking complementary food while 86.5% were aware that complementary feeding should be introduced at 6 months of age.

It is evident from table 3 that the mothers' knowledge regarding problems with breastfeeding is insufficient. For example, only 39% answered that breastfeeding must be continued if mother has breast engorgement, 48.5% answered that breastfeeding must be continued if the mother has cracked nipple and 53.9% answered that breast milk production is not influenced by breast size.

As shown in table 3, the knowledge of mothers regarding practical aspects of breastfeeding is sufficient in some of them as exclusive breastfeeding must be practiced until the infant was 6 months old and blenching after feeding showed baby was full (91%), while it was insufficient in other aspects as false beliefs like giving water to baby is encouraged after every breastfeeding (54%), oral thrush was frequent in babies who breastfeed was (46%), massage may reduce breast engorgement (48%).

Figure 1 demonstrates that overall mother's breastfeeding knowledge was good among 35% and excellent among 22% of them while it was unsatisfactory among 43% of the mothers.

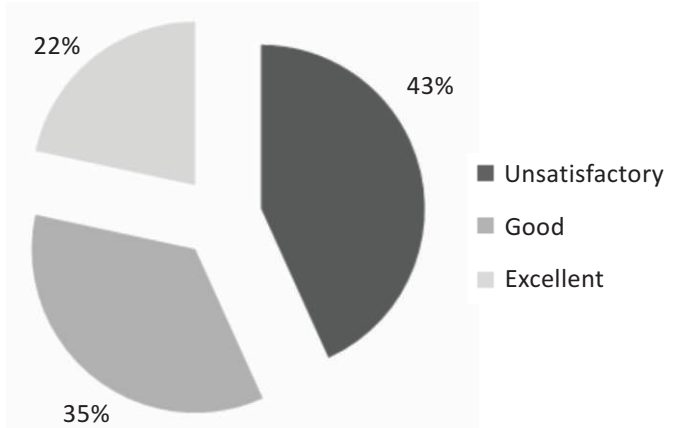


Figure 1: Level of knowledge regarding breastfeeding

Practices regarding breastfeeding

Breastfeeding in the first 6 months was practiced by 42% of the participated mothers. Only 23% practiced exclusive breast feeding. Among those who breastfed their babies, 51% initiated breastfeeding in the first hour of birth, 21% between 2-4 hours and only 20% initiated it after 24 hours. Only 73% of mother had not given any prelacteal feeding to their babies.

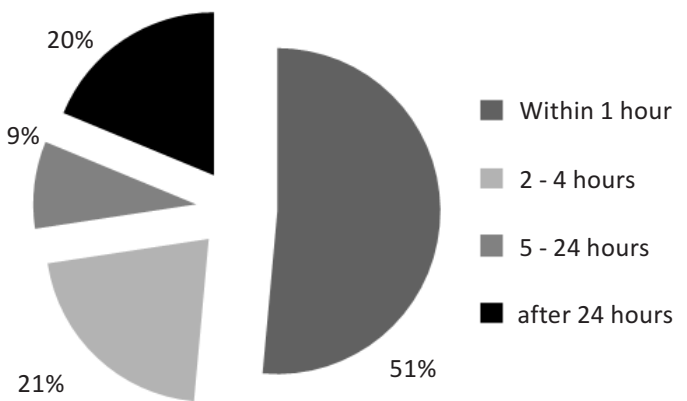


Figure 2: Initiation of breast milk

Barriers to Exclusive Breast Feeding

As obvious from figure 4, no enough breast milk (47.9%), crying hungry (31.5%), work-related problems (13.7%), mother illness (6.8%) were the commonly reported barriers against exclusive breastfeeding.

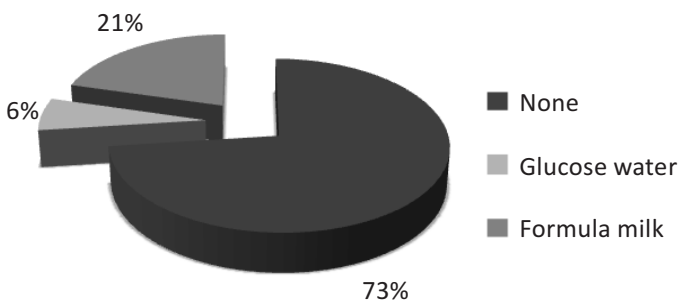


Figure 3: Use of prelacteal feeding

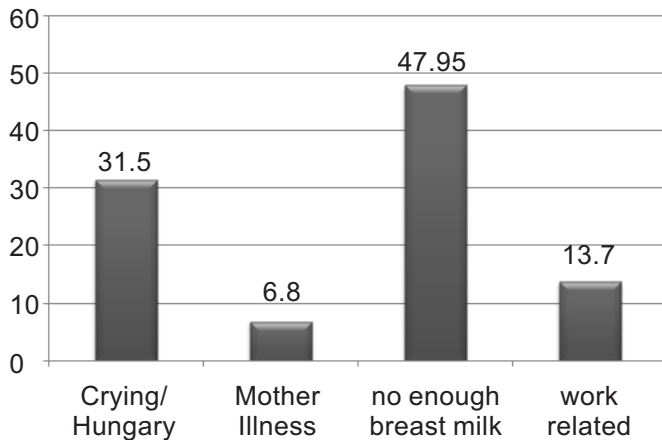


Figure 4: Barriers against exclusive breastfeeding

DISCUSSION

Exclusive breastfeeding for the first 6 months of life improves the growth, health and survival status of newborns²¹ and is one of the most natural and best forms of preventive medicine²². Exclusive breastfeeding plays a pivotal role in determining the optimal health and development of infants, and is associated with a decreased risk for many early-life diseases and conditions, including otitis media, respiratory tract infection, diarrhea and early childhood obesity²³.

Currently the recommendations from the global strategy for infant and young child feeding, developed by the World Health Organization and UNICEF, is that infants should be exclusively breastfed for the first 6 months of life²². Still, less than 40% of infants under 6 months of age in the developing world are exclusively breastfed²⁴.

Despite UNICEF and WHO recommendations, only 53% of children under 6 months of age were exclusively breastfed in Nepal. Median duration of any breastfeeding is about 34 months and exclusive breastfeeding were about 4.2 months²⁵. Though 91% had good knowledge regarding EBF, rate of EBF practice up to six months of age in our study (23%) was substantially lower than the 53% finding in the National Demographic Health Survey (NDHS) in 2006¹⁹. Poverty and ignorance were the main reasons for this practice, which is one of the major causes of malnutrition among infants²⁵. In a study by Chudasma RK et al in Rajkot also showed the prevalence of exclusive breast feeding at 6 months of age of infants was found to be 62%(26).

Foo LL et al reported prevalence rate of 21% which is similar compared to present study²⁷. Whereas the study done by Yadavannavar MC and Shailaja S Patil showed only 13.36% of mothers practiced almost exclusive breast feeding up to 4 months²⁸. This shows despite the demonstrated benefits of breast feeding, breast feeding prevalence and duration in many countries exclusive breast feeding for the first 6 months of life are still lower than the International recommendations of

WHO². But it should also be considered that prevalence of EBF will also depend upon the methods of data collection and definitions used in the study.

Preparation of mothers before they give birth is fundamental to the success of exclusive breastfeeding. However in our study it was seen that only 59% of the women had received any advice on breastfeeding during antenatal period. Similar study done in Pokhara showed only 53% of the women received advice on breastfeeding during ANC visits²⁹. In India advice were received only by 48% of women³⁰. Support and counseling should be available routinely during ante-natal care, to prepare mothers; at the time of birth to help them initiate breastfeeding; and in the postnatal period to ensure that breastfeeding is fully established.

Regarding initiation of breastfeeding 74.5% of mothers had idea on starting breast feeding within ½-1 hr of birth (table III) and in practice only 51% mothers started breast feeding within ½-1hr of birth. Data from 2006 NDHS showed that nearly 1 in 3 children were breast-fed within ½-1hr¹⁹. One study done in Dharan showed only 10% of the mother had knowledge regarding initiation of breastfeeding but 41.5% practice it³¹. According to a study conducted in rural Ghana, it was concluded that if all women initiated breastfeeding within 1 hour of birth, 22% of the infants would be saved from death. In the Indian context, this means that 250,000 neonates can be saved from death annually by just one act of initiation of breastfeeding within 1 hour of birth³². In one study done in India, it was seen that although 92% of the mothers knew the recommendation of initiating breastfeeding within one hour only 36% had actually done it³⁰.

One of the major reasons for the delay in our study was that the child was sick. This could be because of the fact that the study was conducted in a tertiary care institute where mothers whose babies were sick were retained in the hospital for more days and were included in the study. The second reason was that there was delay in shifting from labour room. The other reasons (too tired to sit up and feed, baby was sleeping) only reflected that the mothers were not motivated adequately for initiating breastfeeding within one hour of birth. Hence intensive efforts need to be put for the timely initiation of breastfeeding preferably within the labour room itself if there is delay in shifting and the importance of early initiation of breastfeeding needs to be stressed to the mothers in the antenatal period itself.

The unique nutritional and antibody properties of colostrum and the disadvantages to those infants not fed with colostrum are now well recognized and documented². In our study, only 38% of the mothers knew that colostrum needs to be given which is very low compared to others studies in India where the importance of colostrum was known to 75- 90% of the mothers^{33,34}.

The mother's perception of "no enough breast milk" is a well-known problem hindering optimal EBF practice in many communities^{35,36}. A key reason, however, why a child could remain hungry is not because breast milk is insufficient but because women do not spend adequate time on breast feeding due to the pressure of house work or are not aware that the milk should be exhausted from one breast before feeding from the second breast³⁷. In our study too, "no enough breast milk" was also the main reason for introducing other foods, especially other milk, semi-solid porridge, before six months of age. A total of 73 (35%) infants were introduced to other foods (semi/solid or animal milk) before six months of age. Of which 48% reported due to insufficient breast milk production. This finding is concordant with another breast feeding study conducted among employed women in periurban areas of Kathmandu³⁸, and a quantitative and qualitative study conducted among 750 young children residing in Far Western district of Baitadi, Nepal³⁹. It is also noteworthy to mention that in our setting, rice is introduced at 5 - 6 months of age with a special ceremony called Pasni, or the rice feeding ceremony, which also seems to interfere with EBF for up to six months of age⁴⁰.

In the present study, several limitations should be considered which depend upon the methods of data collection. Measuring EBF prevalence using recall since birth is difficult and may be inaccurate. This required a long recall period and some women might have forgotten the time when liquids including water or semi-solids were introduced and given wrong accounts, which could be overcome only by a prospective design followed from birth. Moreover this study included only mothers attending for vaccination clinic in tertiary hospital, and the results may not be representative of the whole nation.

CONCLUSIONS

The prevalence of EBF for up to 6 months of age was still low as per WHO recommendations. The mother's perception of "insufficient breast milk" was also the main reason for introducing other foods. Most of the mothers did not receive any information on breast feeding and even hospital delivered babies had a low rate of EBF. So it is advisable to carry out for EBF promotion a strategy by making a guideline for breast feeding education focusing that mother's milk - a life milk' within the existing health care system such as the antenatal, after delivery and vaccination clinics.

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