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FACTORS CAUSING EXCLUSIVE BREAST FEEDING FAILURE IN A PAKISTANI URBAN POPULATION

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ABSTRACT

Objective: To determine the factors responsible for termination of exclusive breast feeding in our population.

Location and Duration: A cross sectional study was conducted at Combined Military Hospital Quetta, from February 2010 to June 2010.

Study design: Cross-sectional study.

Sample Size: A total of 620 mothers carrying healthy infants were interviewed.

Inclusion Criteria: Mothers who failed to exclusively breast feed their infants within first six months of life and started supplemental feeds.

Data Collection Procedure: A semi-structured, preformed questionnaire was filled containing information about mother's age, infant's sex and reasons for discontinuation of exclusive breast feeding.

Data Analysis: Data was analyzed using SPSS version 18.

Results: Mean maternal age was 25.87 years. Early failure was seen in 41.9% and late failure in 58.1% infants. Difficulties in initiating and establishing breast feeding (84%), knowledge deficit about breast feeding benefits (78.8%) and milk insufficiency (69.2%) were the main reasons for "early failure". Deficient knowledge about exclusive breast feeding which included its WHO definition of six months and its benefits (88.9%) was the most common reason of addition of weaning diets after 4 months of age. Other significant factors found for failure were working mothers (21.3%), premature delivery (13.5%), early second pregnancy (16.1%), and perception of poor weight gain by infant while exclusively breast fed (19.4%).

Conclusion: Exclusive breastfeeding ensures the best possible health of an infant. Dedicated efforts are required at national level for dissemination and promotion of knowledge about exclusive breast feeding.

Keywords: Milk insufficiency, Exclusive Breast Feeding (EBF), Breast Feeding.

INTRODUCTION

Benefits from breastfeeding for newborns and infants are well-documented[1]. Breastfeeding provides ideal food for the healthy growth and development of infants. Research in developed and developing countries of the world, provides strong evidence that breast feeding decreases the incidence and severity of a wide range of infectious diseases including diarrhea[2] and respiratory tract infection[2] in infants, necrotizing enterocolitis and late-onset sepsis in preterm infants[3].

In 2001, World Health Organization announced its global recommendation that infants should be exclusively breast fed for six months[4]. WHO defines exclusive breast feeding (EBF) as exclusive breast feeding for first six months of life in infants, excluding solids or any other fluids (including infant formulas) except medicines, vitamins, and minerals[4]. American Acadamy of Paediatrics recommends that EBF is sufficient to support optimal growth and development for approximately the first 6 months of life[5]. Advantages of EBF, as well as risks of morbidity and mortality from non-EBF, have been documented extensively worldwide[6]. It has been estimated that the deaths of 10% to 15% of children younger than age 5 years in resource-poor countries could be prevented through 90% coverage with EBF alone[6].

With the acknowledgement that breastfeeding is beneficial, a commensurate practice is expected but a recent estimate by the WHO showed that worldwide only 35% of children between birth and their 5th month are

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breastfed exclusively[7]. In Pakistan only 16% mothers exclusively breast feed for only three months[8]. In India and Bangladesh figures for EBF are 51% and 40% respectively[9]. A multilevel analysis done in East and Southeast Asian countries, revealed EBF rates in infants younger than age 6 months to be in between 30% to 40%[10].

Multiple factors have been implicated as a reason for failure of continuation of EBF. A number of studies have been done in developed and developing countries to determine the factors that lead to early termination of exclusive breast feeding[11-24]. This study was conducted with the aim to determine the factors responsible for termination of EBF in our urban population.

MATERIALS AND METHODS

This cross sectional study was conducted at the outpatient department and vaccination centre of Combined Military hospital, Quetta, Pakistan. The duration of study was five months from February 2010 to June 2010. All mothers carrying healthy infants; who came for vaccination or for minor ailments, and who failed to exclusively breast feed their infants within first six months of life and started supplemental feeds (milk or other supplements) were included in the study. All mothers with infants who were exclusively breast fed till six months of age were not registered. Also, mothers carrying malnourished, very sick, chronically ill or infants with cardiac diseases, chronic respiratory ailments, psychomotor retardation, and renal failure were not included in the study, irrespective of their feeding status.

A total of 620 mothers were enrolled in the study by convenient sampling technique. At all levels participants were briefed on the study objectives and their verbal consent was recieved before administering any of the research protocols. Institutional approval was received and all the mothers were interviewed in their language of understanding by one of the researchers after permission was granted by the ethic committee of hospital. With each participant's help a semi-structured, open ended, pre formed questionnaire, developed by the researchers was filled. Section I included recording of mothers' ages and sex of infants. In section II, one or more reasons mentioned by the mothers as cause of their failure to exclusively breast feed their infants were noted. Statistical analysis was undertaken with the Statistical Package for the Social Sciences, version 18.0 for windows (SPSS Inc, Chicago, IL). Descriptive statistics were applied to calculate the frequencies.

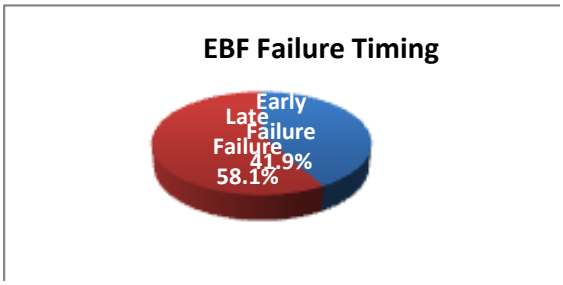

Figure-1: Timing of exclusive breast feeding failure.

RESULTS

A total of 620 mothers were interviewed on regular basis over a period of 5 months. Maximum women were between 21 to 30 years of age (84.1%) and the mean age was 25.87 years. In mother infant pairs 340 infants were males and 240 were females. Early failure (less than 3 months) was seen in 260 (41.9%) infants and late failure (4 months to end of 6 months) in 360 infants (58.1%) (Figure 1). Data collected identified various factors responsible for failure of exclusive breast feeding in our society (Table 1).

Deficiet knowledge of definition and duration of EBF was told by 71% of the respondents as one of the reason for initiation of weaning diet. Deficient knowledge about benefits of breast feeding in terms of nutrition and prevention from diseases was endorsed by 56.3% of the mothers. An equal percentage (54.8%) of mothers felt breast milk is insufficient for better growth of the baby and added semi-solids, water and milk during first six months of life. In, one third mothers (35.5%) feeding issues

like poor sucking or poor swallowing reflex by baby, improper latching technique while feeding and resultant lactation failure was held responsible for early failure of EBF. Early failure was also seen in premature deliveries (13.5%) or mothers with breast pathology (6.5%) like sore nipples, mastitis, breast engorgement, or anomalies like inverted nipples.

A number (21.3%) of working mothers A number couldn't pursue EBF due to job commitments and 18.5% failed to exclusively breast feed their babies due to lack of support from their family. Almost equal frequencies were observed for discontinuation of EBF due to history of breast feeding failure in previous pregnancies (18.1%) or mothers felt that their babies were not gaining weight (19.4%). Some mothers (16.1%) had to compromise on EBF due to early second pregnancy and 12.9% mothers stopped feeding or started supplements as they felt weak while feeding exclusively.

Difficulties in initiating and establishing breast feeding (84%), deficient knowledge about breast feeding benefits (78.8%) and milk insufficiency with resultant addition of supplements (69.2%) were the main reasons for "Early Failure" of EBF. On the contrary deficient knowledge about EBF, which included its WHO definition of six months and benefits (88.9%), was the most common reason of addition of weaning diets after 4 months of age and thus causing "Late EBF failure".

DISCUSSION

In a 2010 WHO estimate, conducted in 33 countries worldwide, showed that only 35% of children between birth and their 5th month are exclusively breastfed[7]. In our study early failure (less than 3 months) was seen in 41.9% and late failure (between 4 to 6 months) in 58.1%. Same was reflected in a population-based study of 3,204 infants in Hong Kong where proportion of exclusively breastfed infants in the 5th month was only 14.7%[11]. Statistics from Pakistan showed weaning age of 4.4(+/-0.99) months in a study conducted in Lahore[14]. Likewise a study conducted in Multan showed that till 4 month of age EBF rate was 66% but later there was a sharp decline to 16% at six months of age[15]. Early failure of EBF as high as 51% within 3-5 weeks has also been found in studies done in Australia[12] and Denmark[13].

Table-1: Factors causing failure of exclusive breast feeding.

Factors causing failure of EBF	Timing of Failure		
	Early n=260 no (%)	Late n=360 no (%)	Total n=620 no (%)
Premature delivery	84(32.3)	0(0)	84(13.5)
Feeding issues	220(84.6)	0(0)	220(35.5)
Milk Insufficiency	180(69.2)	160(44.4)	340(54.8)
Knowledge deficit about EBF duration	120(46.2)	320(88.9)	440(71)
Knowledge deficit about breast feeding	205(78.8)	144(40)	349(56.3)
Past history of breast feeding failure	115(44.2)	0(0)	115(18.5)
Poor family support	55(21.2)	57(15.8)	112(18.1)
Breast pathology or anomaly	40(15.4)	0(0)	40(6.5)
Early second pregnancy	20(7.7)	80(22.2)	100(16.1)
Working mother	65(25)	67(18.6)	132(21.3)
Poor weight gain	40(15.4)	80(22.2)	120(19.4)
Maternal weakness	60(231)	20(5.6)	80(12.9)

Various factors have been implicated as cause for non compliance to EBF in studies done internationally and within Pakistan[11-24]. A very

striking finding in our study was a frequency of 71% on the whole and 88.9% in the "late failure" group; who introduced weaning diets once their infants crossed the age of four months. The most common explanation given for this practice was starting supplements at 4 months of age as they were ignorant about 6 months of EBF as defined by WHO[4]. Similar age preference of 4.4(+/-0.99) months was reflected in a study conducted in Lahore[14]. However, knowledge deficit only about benefits of breast milk was reported in 56.3% as a reason for failure of EBF. Similar findings were reported in a study undertaken in Denmark[13].

A significant number of mothers in our study (54.8%) added supplements as they perceived that their feed is insufficient to fulfill their baby's demands. In a study in Hyderabad, 36.8% mothers reported that the most difficult reason for non exclusive breast feeding was babies' un-satisfaction on EBF[20]. Similar results were found in local studies conducted in Lahore[16], Karachi[14] and Sukkur[17]. Likewise, a survey in Nigeria showed the mothers' perception that their babies remained hungry after breastfeeding (29%) as a factor for failure of EBF[21]. Otoo et al. also reported milk insufficiency as one of the main obstacles for EBF in Ghanaian women[22]. On the contrary, a significant number of mothers in our study with adequate milk production, failed to initiate breast feeding due to improper latching technique or poor sucking by the infant (35.5%). Kronborg and Vaeth[13] as well as Petit[24] also found early failure due to lack of maternal confidence in their ability to feed their babies.

Premature deliveries were responsible for early failure in 13.5% of our mother infant pairs. Premature births have been reported as a factor for failure of EBF in 3.75% of babies in a study conducted in Sukkur[17]. Likewise, higher rate of premature births with resultant lactation failure and thus non exclusive breast feeding has been implicated by Henderson et al[23]. Breast related problems and anomalies like inverted nipples were reported in 6.5% of our interviewees as a reason to add top feeding. Similarly, cracked nipples, mastitis, breast abscess and inverted nipples were implicated as reasons for stopping EBF by Islam and Naila in a study conducted in Rawalpindi[18]. In a Nigerian study, around 25% of mothers described pain in breasts as a reason for failure of EBF[21]. Otoo et al. in their study also reported breast and nipple problems as one of the obstacles in pursuing EBF[22].

With increasing number of women becoming part of human work force and job commitments taking their toll, 21.3% mothers in our study described their work obligation as a reason for failure of EBF. Rates of 11.5%, 19.4%, 24% and 40% have been found in studies conducted in Karachi[14], Uganda[24], Nigeria[21] and Sukkur[17] respectively. Working mothers and EBF failure association is also highlighted in several other national and international studies[10,11,16,19,22,24].

Some mothers (18.5%) in our study reported poor family support and help in implementing EBF. Psychosocial influences have also been found in studies conducted in Australia[12] and Denmark[13]. Family pressures especially from mother-in-law (25%) have been reported by Agunbiade and Ogunleye in Nigerian mothers[21]. Some mothers (18.1%) just failed to exclusively breast feed their infants due to lack of confidence in themselves in light of experiences from earlier pregnancies. Same has been found in a Scandinavian Study[13].

Early second pregnancy resulted in failure in 16.5% of our sample population. Similar but a very small proportion (1.25%) was reported as a reason for EBF failure in a study conducted in Sukkur[17]. Around 19.4% mothers in our study felt that their babies were not gaining weight and so added supplements especially formula milk. Same reason was mentioned in 5.2% of participants in a study conducted in Karachi[14]. Around 12.9% mothers stopped feeding or started supplements as they felt weak while feeding exclusively. Maternal health problems (26%) were mentioned in a Nigerian study as a reason for adding supplements[21].

Nevertheless, we believe that different frequencies of factors found in our study represented only the opinions of mothers' residing in an urban Pakistani society. Although many of them had a rural background, the frequencies didn't represent a rural opinion. Future studies should aim at conducting similar studies in rural areas of Pakistan.

CONCLUSION

Although various factors force mothers to add supplemental feeds before 6 months of age, this is beyond doubt that exclusive breastfeeding ensures the best possible health as well as the best psychosocial development of an infant. Religious efforts at National level for dissemination and promotion of knowledge about exclusive breast feeding is required especially the clarification about weaning age of 6 months and not 4 months.

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