Constraints to Adoption of Appropriate Breast Feeding Practices in a Squatter Settlement in Karachi, Pakistan

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Abstract

Appropriate breast feeding practices (ABFP) are important for successful lactation. Constraints to adoption of ABFP by mothers in a squatter settlement in Karachi, Pakistan are reported. One hundred and two mother-infant pairs were followed from birth to 16 weeks of age. Eighty-seven infants received prelacteal feeds of honey as a quasi-religious ritual, 16 received ghutti for "cleansing of stomach", other prelacteal feeds were given as substitutes for breast feeding. Twenty nine mothers initiated breast feeding within 4 hours of birth. Supplemental water was given to 53 infants; major reasons being mothers' perception of thirst and diarrhoea in the infant. Supplemental milk was given to 24 infants. Insufficient milk and work load of mothers were main reasons for supplementation.Home remedies were given in 36 instances for prevention/treatment of indigestion or colds. Quasi-religious ritual of giving honey, perception that child birth was a major stress and early initiation of breast feeding adds to that stress, fear of dehydration and perception of insufficient breast milk were the maj or constraints to adoption of appropriate breast feeding practices (JPMA 47:63, 1997).

Introduction

Breast feeding remains the first and preferred method of infant feeding by the majority of Pakistani women, as with women in most developing countries around the world[1-5]. Child survival strategies recommend exclusive breast feeding for the first four months of life[6,7], but reports on child feeding practices from Pakistan show that exclusive breast feeding is rare and that early supplementation with waterand otherfluids is common, alongwith other inappropriate breast-feeding practices such as delayed initialion of breast-feeding, giving of pre-lacteal feeds and discarding of colostrum[2,8-11]. Similar inappropriate breast feeding practices have been reported from Turkey, Indonesia, Malaysia, Kenya and various parts of India[12-18].

However, practices such as delaying initiation of breast feeding till the second or third day of life, discarding of colostrum, the provision of prelacteal feeds and early supplementation with nutritive and non-nutritive fluids may all have a negative impact on lactation[19-24]. We therefore, conducted a study to determine the impact of appropriate breast feeding practices on maternal lactation and growth and diarrhoeal morbidity in infants. This paper reports on the constraints to the adoption of appropriate breast-feeding practices by mothers in an urban squatter settlement in Karachi, Pakistan.

Methodology

The study was conducted in a squatter settlement (Orangi) in Karachi. The population of Orangi comprises of different ethnic groups. The majority of the population are migrants from India (mohajirs) and from the north western part of Pakistan (pathans). Orangi is one of the largest squaller settlements in Asia with a population of over a million. The study subjects were drawnfromapopulation of approximately nine thousand individuals registered with the Aga Khan University's Primaiy Health Care (PHC) programme. The PHC programme has three tier 12 outreach community health workers

(CHWs), supervised by a lady health visitor and doctor-nurse team that acts as manager of the programme. The CHWs are women from the local community with a minimum of grade five level education. Upon recruitment, they are provided six weeks intensive training in PHC with a focus on maternal and child health programmes. Continuing education and on-job training is aregular feature of the PHC programme. The CHWs are paid a small monthly stipend for theft services.

This study was conducted during July, 1992 to June, 1994, in two phases. During phase I, focus group discussion (FOD) and indepth interviews were held at the study site to obtain information regarding perceptions, beliefs and practices related to infant feeding. FGDs/in-depth interviews were held in the native tongue, Urdu, with women of child bearing age, mothers, grandmothers, fathers, midwives and CHWs. The focus group comprised of 10-12 persons. FGDs and in-depth interviews were conducted by the two primaty investigators (SHB and DI) using prepared guidelines inoitler to maintain uniformity from group to group. The proceedings were recorded on audio tapes and later transcribed and translated into English.

Common beliefs and practices relevant to breast feeding were identified and the CHWs trained to provide health education to the mothers regarding the avoidance ofprelacteal feeds apart from the ritual lick of honey, the feeding of colostrum, early initiation of breast feeding, exclusive breast feeding, on demand feeding, feeding during the night and continuation of breast feeding even during illness. The CHWs motivated the mothers to adopt apprnpriate breast feeding practices on a one to one basis during the third trimester of pregnancy and throughout the first 16 weeks after delivery.

In Phase II of the study, after birth of the infant, the mother was interviewed in detail regarding her infant feeding practices in the immediate post-partum period. Since the objective of the study was to determine the constraints to adoption ofappropriatc breast feeding practices by mothers of normal weight healthy infants, those who weighed less than 2500g at birth and twin births were excluded from the study. Thereafter the mother-infant pair were followed for 16 weeks. Mothers recorded their infant feeding practices and whether their infants had coughs, colds, fever and/or diarrhoea daily on pictorial recording sheets. These sheets were collected by the CHWs at the end of each week and assessed regarding feeding practices and morbidity. Deviations from appropriate breast feeding practices were discussed with the mother and reasons for deviations recorded. A community health nurse, especially recruited for the study, visited those mothers who wcre not following appropriate breast feeding practices and/or those whose infants were reported to have minorchildhood ailments to counsel the mothers regarding infant feeding especially during illness. As an internal validity check, one investigator (SHB) visited five percent of the study mothers each week to discuss reasons for deviation from appropriate breast feeding practices.

Results

The age of 102 mothers included in the study ranged from 20 to 49 witha mean of 29.3 years. Forty-two of them had 5 ormore years of schooling. 17 couldjust read and write; only 43 could not read and write. Four mothers were primipara. In the multiparous mothers the parity ranged from 2 to 10. There were 55 male and 47 female infants in the cohort. Their mean birth weight was 3197±466 gm, 10 low birth weight infants and one pair of twins were excluded from the study. Nine mothers were lost to follow- up. Three left Orangi permanently and the other[6] went to visittheirmother'sfamily, after "chilla" (40 days after the infant's birth) as is traditional in some communities in Pakistan.

The results of our FGD showed that giving prelacteal feeds was a deeply entrenched tradition.. Women of all age groups in the FGDs considered giving a lick of honey after birth to be a religious injunction. Even FGDs with the males revealed that they firmly believed that giving honey was sanctioned by Islam. Nine mothers did not give any prelaeteal feed. Of these 7 initiated breast feeding within 1 hour and the other two within 4 hours of birth. Although the majority of mothers (82) gave the ritual lick of

honey before giving anything else, 4 mothers gave "ghutti" as the first prelacteal feed. Forty-one mothers gave one or more prelacteal feeds in addition to honey. Twenty mothers gave water, 16 ghutti, 9 tea, 4 animal milk, 3 sugar salt solution and 3 gave a variety of other substances, as prelacteal,feeds afterthe traditional lick of honey.

Table I. Prelacteal feeds given to infants by mothers in a squatter settlement in Karachi, Pakistan.

Type of prelacteal feed	Number*	Percentage
Honey	87	66.8
Water	20	13.9
Ghutti	16	11.2
Tea	9	6.3
Sugar-salt solution	3	2.1
Animal milk	3	2.1
Others	5	3.5

*Multiple responses

Table I shows the type of prelacteal feeds given.

Breast feeding was initiated by 7 mothers within one hour of delivery, 22 mothers after 4 hours of birth and 36 delayed initiation of breast feeding for more than 12 hours (Table II).

Table II. Initiation of breast feeding by mothers in a squatter settlement in Karachi, Pakistan.

Time after birth	Number	Cumulative percentage
<60 minutes	7	6.9
1-4 hours	22	28.4
>4-12 hours	37	64.7
12-24 hours	31	95.1
24 hours	5	100
Total	102	100

Time of initiation of breast feeding was not related to the age, parity, length of labor or the educational level of the mother When mothers were asked the reason for the delay in initiation of breast feeding, many initially responded that there had been no delay, as breast feeding was started as soon as "they were able" to start breast feeding. On probing they gave various reasons as shown in Table III.

Table III. Reasons for more than one hour delay in initiation of breast feeding by mothers in a squatter settlement in Karachi, Pakistan.

Reasons	Number* (95)	Percentage
Recovery from delivery	64	67.4
Because of night	18	18.9
Unable to sit	7	7.4
Recovery from Caesarean	4	4.2
High blood pressure	2	2.1

*Seven initiated breast feeding within one hour.

None of the study mothers reported discarding colostrum and 40 mothers did not give supplementary milk or water to their infants during the course of the study. Supplementary milk was givento 24 of the study infants. Of these, 15 received supplementary milk regularly once it was started and others were given occasionally i.e., less than 7 times per week. The major reasons forgiving milk were perceived milk insufficiency and work load of the mother (Table IV).

Table IV. Reasons for giving milk by mothers in a squatter settlement in Karachi, Pakistan.

Reasons*	Number	Percent
Not enough milk	91	34.2
Mother busy/working	64	24.1
Infant hungry[a]	59	22.1
Minor health problems in mother	34	12.8
Advised by doctor[b]	8	3.0
Advised by husband	3	1.1
Others	7	2.6

*Multiple reasons

[a]This response was given in conjunction with either response 1 or 2.

[b]This response was given in conjunction with response 4.

The problems for which mothers resorted to supplementary milk were breast sore, weakness, tiredness and tension. In addition, six mothers gave supplementary feeds because they were fasting.

Water was given to 53 study infants. The major reason for giving water was the mother's peiteption that the infant must be thirsty during the hot weather (Table V).

Table V. Reasons for giving water by mothers in a squatter settlement in Karachi, Pakistan.

Multiple reasons	Number	Percent
Hot weather/infant thirsty	140	38.7
For habit	42	11.6
Advised by elders	40	11.0
Diarrhoea	35	9.7
Mother busy/working	24	6.6
Minor health problems in infant	22	6.1
Advised by health care professionals	22	6.1
Jaundice	17	4.7
Mixed with home remedies	13	3.6
Others	7	1.9

When these thirsty wouldn't the infant be thirsty?". The mothers also gave water to their infants to accustom them to drinking plain water (for habit), as well as if they had problems such as neonatal jaundice, constipation, stomach ache or colic. In some instances the water actually was the vehicle for giving a home remedy to their infants. Family members often advised the motherto give the infant waterwhenthe mother had consumed a food or medication which was considered to be "hot". Similarly mothers were sometimes advised by practitioners of traditional medicines who were treating the mothers to give water to their infants because the medicines the mothers were taking were "hot". Although diarrhoea was listed as a reason for giving water in 35 responses, our CHWs reported that in almost 50% of these eases the infant actually just had the soft stools typical of breast fed infants. During the first week, 16 mothers gave their infants honey, 8 mothers said they gave it because it was customary to do so and 5 gave protection against colds as the reason for giving honey. Of the 16 infants only one was reported to actually have a "runny nose". Sevenmothers gave theirinfants ghutti to aid in digestion. Thereafter the use of honey and ghutti declined with 1-2 mothers giving honey for protecting against coughs and colds and not more than 4 mothers giving ghutti in any given week either as a cure for stomach ache, constipation orto aid in digestion. Of the 15 infants who were given ghutti because of a stomach ache, only 4 were reported to cry and fuss alot that week. In addition to honey and ghutti, gripe water was the most commonly used substance for gastrointestinal problems and "hing" (asafoetida) was used both for gastrointestinal problems as well as for cough and colds. Feeding on demand was generally practiced, especially by those mothers who exclusively breast fed. The average number of times mothers breast fed the infants was 14 times in 24 hours in the first week and 13 times at 16 weeks of age. Practically all the mothers breast fed at least twice during the night. No mother reported discontinuation of breast feeding during infants illness. Ml mothers continued to breast fed at 16 weeks though 15 mutinely gave supplementary feeds as well.

Discussion

The focus of our health education was on avoidance of prelacteal feeds other than honey. Since the

ritual lick of honey was a deeply entrenched tradition, considered by some as sanctioned by Islam, it was not actively discouraged:

However, honey water as a substitute for breast milk was actively discouraged. The giving of prelacteal feeds is a commonly occurring practice in the Indian sub-continent, WHO data shows that in rural India approximately 93% of the infants surveyed were given prelacteal feeds for the first two days of life followed by beast feeding on demand[25]. Infants in Bangladesh are reported to be fed honey or mustard oil for three days in combination with or followed by breast feeding forabout 30 months[26]. Similarly the giving of prelacteal feeds has been reported as a common occurrence in Pakistan and is often recommended by traditional birth attendants[27]. In spite of our health education, more than 50% of the mothers did give prelacteal feeds of water, ghutti and a variety of other substances in addition to the traditional lick of honey. On the other hand, a retrospective study of feeding practices of middle class mothers in Karachi. reports that 52 of the 83 mothers did not give any prelacteal feed and initiated breast feeding directly[28]. It is difficult to tell whether the differences observed in these two studies from Karachi are due to the differences in ethnicity and socio-economic class or merely due to differences in methodology.

The giving of prelacteal feeds appears to be associated with a delay in initiation of breast feeding. In this study, of the 9 infants who did not receive any prelacteal feeds, 7 were breast fed withinan hourof birth and the other 2 within 4 hours ofbirth. Similarly, it is reportedfmm Egyptthat 67%ofinfants who did not receive any prelacteal feeds were put to breast within 2 hours of birth where as, only 16% of infants who had received prelacteal feeds were breast fed within 2 hours[29]. If health education is to successfully meet its objective of preventing prelacteal feeds, one needs to further explore whether prelacteal feeds arc given as substitute forbreast milk, for medicinal purposes or solely as cultural/religious practice.

Although only a small number of women in our study initiated breast feeding within one hour. initiation of breast feeding was relatively early with 28% initiating breast feeding within 4 hours and 95% within 24 hours of birth. Our earlier study of infant feeding practices had shown that more than 40% of the study mothers delayed initiation of breast feeding till the second day of life[30]. Similarly. Jalil et al reported that 65% of the study mothers from peri-urban slums and 45% of village mothers had not initiated breast feeding 48 hours after the birth of the infant[9].

The major constraint to early initiation of breast feeding was the perceived need of the mother to recover from the stresses of child birth. The high maternal mortality rate of almost 500 deaths/100,000 life births in Pakistan[31] reinforces the belief that delivery isa highly stressful time for the mother and the focus tends to be first and foremost on preserving the mothers health. A study in Jordan reports that more than 50% of 1338 mothers studied reported feeling exhausted after the birth of their infant and that these mothers were less likely to initiate breast feeding early. On the other hand birth between 6 am and 8 pm increased the odds ratio for early initiation[32]. In the present study 18 mothers reported delaying breast feeding “because of night”. Therefore, health education messages aimed at encouraging mothers to initiate breast feeding immediately after birth should incorporate assutances to the mother and her birth attendants that feeding the infant would notjeopardize the mother’s health, in addition to emphasizing the benefits of early initiation on lactation performance and the infants health.

Our efforts at encouraging mothers to feed the infants colostrurn was surprisingly successful given the fact that studies from a wide variety of cultures, including Pakistan, report that discarding of colostrum is a common practice[33-36]. The health workers in our study encouraged the mother to give colostrum by alluding to the traditional practice of giving buffalo or cows colostrum (khees) to sick individuals in need of nutritional replenishment.Reissland and Burghart also report a similar custom from Mithila, India, of offering animals colostmrn (khirsa dudh) to neighbours and workers as a sign of good fortune. They also point Out that although in theory women were vehemently opposed to the idea of feeding

colostrum, in practice the infants did indeed receive colostrum since it was expressed and discarded only when breast feeding was first initiated, thereafter, for the next few days the infant would receive the colostrum[33].

In general, it was easier to motivate the mothers not to give supplementary milk than to convince the mothers that the infant does not require water in addition to breast milk. The giving of water is a deeply entrenched practice, reinforced by most health care professionals that have not been trained regarding child survival strategies endorsed by WHO and UNICEF. The need for water by exclusively breast fed infants who have jaundice and are exposed to high environmental temperatures that prevail in the homes in squatter settlements needs to be studied further. In the present study the mothers projected their own feeling of thirst during the hot summer months, onto the infaius. When it was pointed out to them that the fore milk was dilute milk suited to meet the needs of the thirsty infant, they then took refuge in the advice of elders as a reason for giving water. The impression one got was that mothers saw no reason to stop in the midst of their busy work schedule if all the infant needed was water which could easily be managed by another member of the family. In another set of mothers it was the fear of dehydration that was the prime factor in motivating them to give their infants water. At the time of this study, a mass media campaign to educate mothers about the dangers of diarrhoea and dehydration and the infants need for ORS heightened the mothers' fear of diarrhoea. Malik et a1[37] report that urban Pakistani mothers view frequent watery stools which might lead to dehydration as dangerous or life threatening[37]. In some cases, the normal soft and frequent stools of breast fed infants were regarded as diarrhoea and infants were therefore, given sugar salt solutionorplain water.

Jalil reports that 22-64% of the infants in their study were given supplementary feeds by one month of age9. whereas, the number of infants receiving supplementary feeds was relatively small in our study possibly due to the ongoing interaction with the CHWs. Two major reasons cited by mothers in the present stud for giving supplementary milk were, insufficient milk and the work load of the mother. However, on probing, we found that insufficient milk was cited as a socially acceptable reasonfor supplementation when in fact the mother wanted relief from the demands that exclusive breast feeding puts on her time. Several mothers when pressed to give a reason for starting supplementary feed responded "don't we have a right to go out sometimes without our infants"? (kia hame bache ke baghair baherjaney ka haq nahin hai'?). "How do you expect us to get all our work done if we are constantly feeding the baby". "Why is it that women who have all the servants they need, to do theirhouse work, can give their infants the bottle and we who have so much work to do must constantly be feeding our babies". There are similar reports of women resorting to supplementary feeding in order to decrease the time the mother has to spend breast feeding. During in-depth interviews, mothers in Egypt reported starting supplementary fluids at about 40 days of age since this is the period after which the mother and infant are traditionally allowed to leave the house. In the same context it is interesting to note that the practice of occasionally nursing another woman's child was also reported to be common in this study. but primarily for convenience when the mother needed to be away for some hours.ln fact the time it takes to nurse was mentioned as inconvenient by several informants[38]. In a study of three different ethnic groups - Anglo Americans, Mexican Americans and Jamaicans, it was found that the perception of insufficient milk was significantly more common among mothers who believed breast feeding was inconvenient[39].

It appears that exclusive breast feeding and on-demand feeding call for a time commitment which urban young mothers are unable to make as they lack the social support systems that were present in the more traditional society especially in the initial 40-day post partum period. This observation was also made in the Bedouin Infant Feeding Study where it was reported that nursing on demand rather than on schedule was associated with a higher percentage of reported milk insufficiency and that when mothers felt they needed a break between breast feeds they cited milk insufficiency to introduce the bottle[40].

Given the realities of the women's work-load and the breakdown of traditional family support systems in the developing countries, how rigorously we expect women to adhere to exclusive breast feeding needs to be examined critically. If women are going to occasionally bottle feed a predominantly breast fed infant due to the demands on their time, should it not be the health care professional who guides them as to how this should be managed so as to minimize the risks of the occasional bottle feed? For example, women may not know that expressed milk can safely be stored (in a sterilized container) at room temperature for upto six hours and for 24 hours in the refrigerator[41]. Even when expressed breast milk is fed to the infant the mothers will need to be counselled so as to minimize the risk of contamination. In general, the largest morbidity differences are found when exclusive bottle feeding is compared with exclusive breast feeding; the differences narrow in proportion to the amount of supplementation permitted[42,43]. Secondly, it has been shown that a single daily bottle given in the early weeks postpartum does not have a negative impact on pmlonged breast feeding amongst mothers who are committed to breast feeding[44].

Therefore, information that minimizes the perceived social, personal and physical inconveniences of breast feeding or that presents simple, practical and acceptable strategies for overcoming these inconveniences, would be helpful in promoting appropriate breast feeding practices in our eomniuni-ties.

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