Pakistan NGO Initiative Health Network

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Literature Review on Child Health

Dr. Fehmida Jalil

September 1997

The Asia Foundation

USAID

MotherCare™

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PN-ACH-794

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About the Author:

Fahmida Jalil ***MBBS, DCH, Doctrate in Medicine, FCPS, PhD.***

Former Professor and head of the Department of Social and Preventive Pediatrics, King Edward Medical College. Chairperson Breast-feeding Steering Committee, Punjab. She is Member board of Trustee ICDDRB, Dhaka. Her interests include activities related to safe motherhood and child survival; nutrition and post-graduate medical education. She has179-publications in National and International Journals.

Editor:
Uzma Sarfraz ***BA Political Sciences/English Literature and Computer Sciences***

Uzma has worked as a journalist since 1994. Currently she works as a consulting editor. Uzma has worked on editing assignments for the ADB, UNICEF and The Asia Foundation.

Acknowledgement

The Pakistan NGO Initiative (PNI), launched in 1995, is a USAID-funded project implemented through The Asia Foundation (TAF). The project was designed to strengthen NGO (non-governmental organization) capacity to work with local communities to access and deliver improved social sector services, with emphasis on maternal health, child survival, female education and family planning. Technical assistance in health is provided by cooperating agencies: MotherCare/Manoff, BASICS and Wellstart International's Expanded Promotion of Breastfeeding Program (EPB).

The program was initially managed by Ms. Judith Standley, under the technical assistance provided by Wellstart International in collaboration with Mr. Mark McKenna, Program Director for PNI at TAF. This work for community-based promotion of breastfeeding was based on the communication strategy developed from the qualitative research work initiated by the national Breastfeeding Steering Committee in 1990. PNI is being implemented by The Asia Foundation (TAF), with technical assistance provided by MotherCare, BASICS, and Wellstart EBP, three global USAID projects.

This document is published to provide program managers and policy makers from NGOs, government and donors with the information collected on behavioral/KAP studies done in Pakistan during the last 10-years. I am thankful to all the national organizations, who sent us their literature (published or unpublished) for the review.

The MotherCare Program Coordinator and two local MotherCare/Manoff consultants conducted a thorough review of qualitative research studies on breastfeeding and other child feeding practices. Their synthesis of published and un-published documents included an analysis of current behaviors related to child health and child feeding and, also, barriers to changing those practices.

The literature review collected information in the following areas of Child Feeding and Child Health:

- *Practices related to young child feeding*
- *Traditional food for young children*
- *Beliefs and practices related to childhood illnesses*
- *Traditional practices for the control of diarrhoea*
- *Knowledge about danger signs for diarrhoea*

Special thanks to Ms. Fehmida Jalil for her efforts in putting the literature review together. Thanks are also due to Ms. Uzma Sarfraz for editing and referencing the study.

Naveeda Khawaja
Program Coordinator, MotherCare
Health Advisor, Pakistan NGO Initiative.

LITERATURE REVIEW

Child Feeding and Child Health

•Practices related to young child feeding
•Traditional food for young children
•Beliefs and practices related to childhood illnesses
•Traditional practices for the control of diarrhoea
•Knowledge about danger signs for diarrhoea

Fehmida Jalil
Sep 1, 1997

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Practices Related to Young Child Feeding

A rich body of data has been generated on breast-feeding practices since the early 1980s. However, due to a lack of a precise definition of the various components of "Optimal breast-feeding", the data from earlier studies was not comparable[1]. To introduce uniformity of understanding, the definitions were clearly spelled out at Innocent in the late 1980s. This report extends over three time periods: 1984 - 1990, 1991 -93, and 1994 -1996. An effort is made here to weigh the knowledge of communities, as well as that of health providers (mostly through qualitative data) against the current breast-feeding practices for the corresponding time period. As much data as possible, is included in this report. In compiling this report, we have taken into consideration that some data might have escaped our attention, but most of the indigenous studies, reports, and reviews, which have a bearing on the subject have been incorporated.

"Breastfeeding" was used as a loose term during the 1980s. It included totally breast fed, and partially breast fed with formula, fresh milk, or water as supplements. The concept of "exclusive" breast feeding was not clear at this time. Nagra et al[2] from Faisalabad have shown that 63% of the mothers in the high socio-economic strata, and 68% in the low-income group were exclusively breastfeeding. Women working in agricultural fields had a higher rate of breast feeding than those working in offices. The primary reason for this in urban areas was that women had return to work, there was insufficient milk, repeated pregnancies, and an underlying concern about hygiene[3]. The cohort study from Lahore by Ashraf et al showed that exclusive breast feeding was uncommon (here exclusive breast feeding means that infants were fed nothing else but that the breast milk alone). Only 9 % of the babies were exclusively breastfeeding at one month of age, with a rapid decline during the first three months[4]. In a study by the GoP, 59.6% of newborns in rural, and 69% in urban areas were exclusively breast fed till the age of 5.6 months[5].

Bottle Feeding

Bottle feeding can be partial or total. Eighty percent of women in the villages, and 70% in the upper middle class practiced partial bottle feeding, and 2-14% in the four socio economic groups practiced total bottle feeding in the Lahore study. Until the age of four months, 1.6% of the village women, and 52% of the mothers from upper middle class gave total bottle feeds[4].

Duration of breast feeding

There is a trend towards fewer children ever breast fed, more so in younger mothers, with a decline in the duration of breast feeding. The percentage of children never having been breast fed had increased from 1.55% to 9.8% in 1983[6,7]. Urbanization and a higher maternal education level were associated with a lesser proportion of breast feeding. Breast feeding was continued by 85% of the mothers till 12 months, and 20% up to 12 months is in village, while 24% mothers from UMC continued to breast feed till 12 months and 4.4% did so till 24 months in the Lahore study[4]. In a cross-sectional study by the GoP, 63% of the rural mothers continued to breast feed till one year, and 16% till 2 years, with corresponding figures of 19% and 59% for urban areas. The study does not define whether breast feeding was partial or exclusive. In yet in another study by the GoP, 80% of the mothers breast fed their babies beyond 2 months, 70% beyond 5 months, and 9% till 18 months in an urban area[8].

Definitions of Optimal Breastfeeding Practices[9]

The "Optimal breast-feeding" practices include :

- Initiation of colostrum within half an hour after birth;
- Feeding on demand (not less than 10 times, during day and night);
- No prelacteal or interlacteal feeding;
- Exclusive breast feeding for the first six months(vitamin drops allowed);
- No feeding of additional water during this time; and
- Continued breast feeding for 2 years or more, after introducing semisolids.

This report will review both the qualitative and epidemiological studies, as beliefs and attitudes in formative research are reflected in practices shown through epidemiological data. The literature is reviewed in light of the definitions given above.

Practices Related to Exclusive Breastfeeding from Birth to Six Months

Initiation of Breastfeeding after Birth

In a study by ~~Khan and Lambert for~~ UNICEF during 1988[10], the attitude of rural women in Balochistan were studied. Eighty percent of them regarded colostrum as bad, and injurious to the health of the newborns. In a similar study of mothers in a private clinic in Karachi by Shahans Latif in 1984, 45% of the respondents considered colostrum a product that should be wasted, whereas 18% thought that it was harmful for the health of the child. In a prospective study of a birth cohort, Jalil et al found that a vast majority of the mothers were wasting colostrum because they believed it to be stale, since its been lying in a breast gland for nine months[11]. Also, it had an appearance which was unlike milk. This opinion was also held by some of the husbands who were also interviewed. Mull studied the "health beliefs and practices of mothers" in rural Chitral[12]. Ninety percent of the mothers said they initiated breast feeding within 24 hours after birth. Fifty percent of the mothers discarded a few drops of initial milk. and then initiated breast feeding. Mothers thought that the stale and bad milk had been done away with, and they could then feed the baby.

In a study of infant-feeding practices of mothers attending "teaching hospitals", Martin[13] observed that for the first two days after birth infants were denied colostrum. Initiation on the first day was the lowest in teaching hospitals at Multan and Lahore (18%), and highest in Quetta at 30%. The Planning Division in 1984 showed that by the 3rd day 40% of the new born in rural, and 25% in urban areas had not received colostrum. Ashraf et al, in a follow up study of 1476 newborns in four different communities in and around Lahore, have shown that at the age of 48 hours, 65% babies in the peri-urban slum and 45% of those in the village had not received their first breast feed[4].

Preference of Prelacteal Feeding Over Colostrum:

Jalil et al from Lahore have shown newborns from four population groups at different socio-economic and urbanization level, who were considered to be "exclusively breastfed," had received some prelacteal feeding. In all the four population groups, 53% received herbal water, 36% received ghutti, 31% honey, and 23% glucose water often in a combination. Eighty seven percent of the new borns in the urban slum areas, and 31% in the upper middle class received honey, while herbal water was given to 80% of newborns in the village, and 82% in peri-urban slums[11]. It seems that mothers in the urban slum and upper middle class preferred honey as a prelacteal food, compared to rural or peri-urban slum mothers whose first choice was herb water. Ghutti was given to a vast majority of the new borns in the study by Martin[13]. It can be home made or commercial, and is given to cleanse the meconium from the baby's stomach. The infants, on average, received 2-3 types of prelacteal food. During these years, formative research was not yet popular in Pakistan. The reasons for preferring prelacteal food over colostrum were mostly due to a lack of knowledge, and inadequate documentation in literature. A majority of the health professionals, much like mothers, believed that milk comes in late and the baby must be thirsty and hungry, and hence in need of some food and drink.

Feeding colostrum and initiating breast feeding are confusingly considered synonymous by a number of researchers. Colostrum is a product which is produced for the first 3-4 days, and is fed to a large number of new born babies. While the concept of colostrum as the first and immediate feed is a different issue. In a vast majority of cases, colostrum is fed but before that a large number of non-human milk products-popularly known as prelacteal foods, possibly contaminated, are fed to the new born baby in various combinations. Hence the initial bonus of protection, designed by nature as a gift to the newborn during the transition from a well protected environment in the womb to the contaminated external environment, is denied[11]. These products are then continued as interlacteal feeds, diluting the beneficial effect of mother's milk.

Studies by NBSC[14, 16] showed that 16% of the mothers in the urban areas, and 96% in the rural areas introduced breast feeding within 24 hours, indicating that colostrum is not totally wasted (particularly in the villages), defying the general concept. Only it may not have been fed immediately after birth and as the first and total food. This study, as well as a study by Pritech", goes on to show that mothers discarded colostrum because they thought it was dirty, stagnated milk and harmful for the child. A few of the mothers did not know why they were discarding colostrum. The studies, however, do not quantify the duration of the malpractice. There is also evidence that the belief of discarding colostrum and delayed initiation is not firmly held, and can be influenced by doctors. In one study by NBSC[14] conducted through focus group discussions, colostrum was generally discarded because it was thought impure or in some way bad for the child. Prelacteal feeding, however, was excessive; often multiple foods were given. Initiation of breast feeding was delayed, often for 2-3 days, as mothers waited for their milk to come in.

In the NWFP, mothers and those from the upper middle class began feeding on the first day. On the other hand, a study by AED[17] in 1994 shows that rural mothers initiated breast feeding within 12-16 hours, while urban mothers initiated it within 3-4 hours after birth (the majority of these were hospital deliveries, where staff had been trained during Breast feeding

Promotion and Lactation Management, and they encouraged early initiation). Most of the mothers in this study believed it was desirable to initiate breast feeding as early as possible, and that colostrum should not be discarded. This is a very positive feedback from mothers. These mothers discarded only a few drops, and then started to breast feed the baby.

Guidelines for the media[18] could be instrumental in spreading awareness by addressing the misconception of colostrum as being bad, and therefore being often discarded, while prelacteal and interlacteal feeding is considered necessary by the mothers. It was suggested that the media could project the image of a mother- in-law who had breast fed her own children, as someone who was experienced, wise, and has useful advice to give than some one who was conservative, traditional, and critical. Since it was mainly the fathers who purchased the alternative milk, they could be the focus of education, so that they could play an active role in child care by offering the mother the right kind of advice.

In the 1991-92 PHES[5] study, all mothers discarded colostrum except for those from NWFP, where breast feeding was initiated within hours after birth. Some mothers discarded 1-2 teaspoons, and fed colostrum after 24-48 hours. A hundred percent of the mothers considered breast milk to be pure and clean, giving strength lasting 40 years. The report writer has a personal experience of listening to mothers making similar statements during the assessment of hospitals for the Baby Friendly initiative. A countrywide survey[5] of knowledge, attitudes and practices regarding child care describes that breast feeding is initiated by 96% mothers; 36% of the mothers started breast feeding immediately after birth, while the remaining started on the 2nd, 3rd and 4th day after birth. During 1993, UNICEF conducted a study in six districts of the Punjab and NWFP to learn about the knowledge, attitude, and practices of mothers from the lower socio-economic strata, about "Facts For Life"[19]. In the province of Punjab, 21% of the mothers initiated breast feeding soon after birth, and 31% did so in NWFP. Sixty three percent in the Punjab and 59% in the NWFP did not want to feed their babies yellow milk.

The focus group discussions in the NBSC[14] study showed that prelacteal feeding was universal, and that it extended as interlacteal feeding beyond the prelacteal period. The first food preference was ghutti or honey. Ghutti, because it cleanses the system, and honey because it is "Sunnet" and sweet, but should be given before "Azaan." The AED[17] study revealed similar information regarding all pervasive administration of prelacteal food, and the fact that the ghutti was universally favoured. However, mothers said that if they were advised by a doctor against ghutti, they would accept it, as this was not a religious obligation. The Media Guidelines[9] suggested that the misconception of prelacteal feed as a necessity can be influenced by a positive attitude the elderly family members. Prelacteals were given because the mother was fatigued after delivery.

The proceedings of a 1988 workshop by Pritech came out with similar information regarding universal prelacteal feeding[4]. The Pritech study also found that mothers gave prelacteal feeding to the baby to clean out the intestines of the baby. In a study by NBSC, women from the higher socio economic strata are more likely to make deliberate choices not to breast feed, as it ties them to the home and spoils their figure[14]. According to a sub-study of the Lahore study, the results of an intervention on the promotion of breast feeding and health education

campaign aimed at mothers and TBAs, were quite encouraging. Mothers were contacted by the health workers during the 5th, 7th and 9th month of pregnancy. The motivation package included a comedy puppet show in the local language on a video tape, a flip chart, 2 posters, and pictorial booklet for literate mothers. A group of mothers was, as matter of course, exposed to this material, and often other female members of the family also joined in . Group discussions were held at the end and experiences were shared. The posters were stuck on the wall of the room. The changes in the attitudes and practices were significant. The median age of initiation was reduced from 57-hours to 10-hours in the village, with 29% of the mothers initiating breast feeding within hours of birth. Prelacteal feeding declined from 100% to 63% in the village and to 41% in the urban slums. This study demonstrated that interventions at the community level do have the potential to make an impact and change behaviour on the time of the initiation of breast feeding and prelacteal feeding[20].

An intervention package used in the slums of Karachi brought about a significant change in breast feeding practices, where the data from cases and control group showed that colostrum was given by 97% of motivated mothers, compared to 3% in controls, and breast feeding was initiated immediately by 67% of the intervention group, compared to 22% in the control group. Sixty six percent of the mothers in the control group gave prelacteals. compared to 31% in the intervention group. Ninety four percent of them later continued exclusive breast feeding their infants until four months of age against 7% in the control group[21]. These results are quite similar to the study from Lahore by Ashrraf et al. The findings only go to prove what inter-personal communication at the grass root level can do. It also proves that mothers are ready to receive good advice and change practices. As both studies were carried out in specified field areas. which are still under surveillance, it would be interesting to follow these mothers to learn whether the change in practices was sustained.

Because of its study design, the MOH data in MICS does not throw light on this issue[22]. According to the 1997 study by U Kalsoom[23], 98% of mothers started breast feeding within the first week. The mean age at the time of initiating breast feeding was 47.4(±32.58) hours. The initiation was even later in home deliveries. Prelacteal feeding was practiced by 94% of the mothers. Colostrum was not fed to 65.4% of the infants. In the Karachi squatter areas. breast feeding was initiated by 28.4% of the mothers within 1-4 hours, and by 65% within 4-12 hours after birth[24]. The results of focused group discussions[14] showed that giving prelacteal feeds was a deeply entrenched tradition. Giving a bit of honey was considered a religious injunction by all mothers; even the male members of the household firmly believed in this ritual. Eighty two percent of the mothers gave honey as the first food, while 4 mothers out of 102 gave ghutti. Forty one percent of the mothers gave one or more prelacteal feeds in addition to honey. Other prelacteal foods given to the newborn included tea, sugar-salt solution, water, and animal milk. The reasons for delayed initiation were recovery from delivery(67%), because of night time (19%), unable to sit (7.4%), recovery from cesarean section (4.2%).

Practices Related to Early Supplementation with Additional Water or Formula

Over the years, breastfeeding practices were being eroded due to the indifference of the medical profession, and active promotion by formula manufacturing companies, both of which led to increasing trends of early supplementation using bottle feeding. Feeding additional water is probably an old cultural tradition, particularly during the summer. However, feeding glucose water or saline to new born had been a long standing practice in hospital deliveries.

Sanghve's report[1] identifies some of the causes of erosion in breast feeding in a traditional society:

- Early supplementation, most frequently being the feeding of additional water or animal milk, which can interfere in breast milk production.

•Insufficient milk as perceived by mothers, a common cause of lactation failure in Pakistan. which has been successfully countered in other countries through lactation management.

The promotion of early bottle feeding was frequent, especially with working women. Jalil et al from Lahore[11] reported a high prevalence of partial breast feeding by one month of age, the proportion being 80% in the village, 84% in the peri-urban slum, 88% in urban slum, and 86% in the upper middle class. In the partially breast fed group, water, buffalo milk, or formula were introduced in the poorer areas: Commercial formula was preferred by the mothers from the upper middle class. Water, in addition to milk in any form, was given to 73% of the infants in the peri-urban slum, to 58% in the village, 45% in the urban slum, and to 23% in the upper middle class. Thirteen percent of the UM class, 9% of urban slum, 5.6% of peri urban slum, and 2.5% of the village infants were not fed any breast milk at the age of one month. Bottle feeding was considered a sign of distinction, and preferably dispensed to the boys.

A sub-study of the main study from Lahore during 1990, investigated 26 healthy infants aged two to four months of age during the summer, with temperature ranging between 24-41 degrees Celsius, and a humidity level varying between 24-77%. Each infant was followed for 15 days. Water was not allowed from day 1 to 8, and was allowed from 8-15 days. A significant gain in weight was observed between 1-8 days and 8-15 days. The difference in weight gain was not significant between the two periods. This indicated that the infants were not dehydrated during the period of water deprivation[25]. Furthermore, no significant difference was observed in the urinary specific gravity between day 8 and day 1, but urinary specific gravity increased significantly after the administration of DDAVP (vasso pressin), indicating that, if needed the infant could concentrate urine when water was restricted. It was concluded that between 2-4 months old healthy infants showed no sign of dehydration if additional water was withheld during summer season. It would, therefore, be of great importance to promote exclusive breast feeding, and discourage the use of extra water in breast fed babies, as this can be a potential source of infection.

The years of 1991-1994 were an intense period of activities for the Child Survival Program, Breast feeding Promotion and Lactation Management campaign, and the CDD program. The scientists were keen to learn the reasons for the erosion in breast feeding practices. It became important to learn the perceptions, attitudes, and practices of both the health care providers and families, particularly mothers, in order to highlight the obstacles that stand in the way of adopting desired practices. A number of qualitative studies were carried out, most of which are reviewed here.

It was during this time that National and Provincial Breast feeding Steering Committees came into being. The three day training courses, designed by local scientists with UNICEF's support, were conducted in all the teaching hospitals in the country, and at most of the DHQs. It was for the first time that pediatricians, obstetricians, and nurses joined hands to promote and protect optimal breast feeding practices in hospitals. The perception and practices in the communities regarding each component of optimal breast feeding practices are also elaborated here.

Additional water

The belief that water must be given almost immediately after birth was strong, and was common in the upper middle class. Grand mothers supported this, and doctors endorsed it. Feeding additional water was seen as "essential," because of its pacifying and hydrating effect. The data from MICS[22] showed that 69% of the 0-4 month old infants were fed water in addition to milk. In a study of the Karachi squatter areas, water was given to 53% of the infants. The major reason for giving extra water was the mother's perception that the infant must be thirsty during the hot weather. Since the mothers themselves felt thirsty during hot weather, they presumed that the infants had the same need[24]. It was also fed to get the infant used to drinking water. Data from this study shows that 86% of the infants were given fluids during the first week of life, like water, honey, glucose water, saline, or herb water. The use of ghutti continued as home remedy for colic, constipation, and to regulate or aid digestion, gripe water and "heeng"(asafoetida) were also used. In seventy four percent of the mothers from a recent study in Lahore, about feeding perception and practices showed that mothers believed water to be necessary for infants in addition to breast milk, particularly during summer[25]. It would keep the baby cool, they thought. In another study, 86% of the infants received fluids other than breast milk within a week after birth, and 98% by the 3rd month. The babies received herbal water to regulate digestion, water to quench thirst, and juice or soup to give strength.[26]

Exclusive Breast feeding and issues of supplementation

The results of focus group discussion in the NBSC[14] study showed that though there was a genuine concern on the part of both mothers and fathers for their children's health, there was an increasingly strong set of beliefs about the need to supplement breast milk as well. The ideal practice for most mothers was mixed feeding, i.e. breast milk plus other milk. This belief was held even by those who recognized that they do not have the means to do so. It was not a matter of choice, they just could not afford bottle feeding alone. The general image of a breast feeding woman , particularly one who breast fed exclusively, was of a poor, thin, tired, and unkempt

village women, while that of a bottle feeding mother was of beauty and freshness. In the NWFP, reasons for adding bottle to breast feeding were that a) the milk was insufficient, or child remained unsatisfied, b) mother was very busy in other chores, thus not having the time to breast feed. c) breast feeding is embarrassing in public, d) next pregnancy, or e) that breast feeding can spoil the figure.

The focus group discussions in an NBSC study showed similar findings. The mother's ideal was to have the option of mixed feeding. The belief that other milk must be started early was prevalent, particularly in rural Punjab, and among the poor and lower middle class, in the urban areas. Commercial formula was often used by the upper middle class and the urban poor. The mothers thought that the healthiest child would be the one getting both breast milk for it gives inner strength, and bottle milk for it makes the baby plump. In the AED study[17] supplementation was considered essential, and was universal. Supplementation or stopping breast feeding was mostly due to the mother's perception of insufficient breast milk. In the Pritech workshop[9], it was deliberated that the fear of breast milk insufficiency was highly prevalent. However, the real insufficiency was quite rare, and no scientific proof was put forward. Participants considered that babies cry for a number of reasons e.g. colic, diaper problems, and a need to be held. These are often misinterpreted as due to an insufficient milk supply.

It was the general opinion of the participants that all mothers breast fed through the first month, but that the majority gave additional water, or buffalo milk; and only a few children were exclusively breast feeding, while about a quarter practiced bottle feeding. All 0-3 months old were breast fed on demand, but the breast feeding practices were poor. According to PHES[8], 64% of the mothers breast fed their infants exclusively upto four months, and 19.2% did so upto 12 months. The single most important cause for stopping breast feeding in this study was next pregnancy (40%), followed by milk drying up (23%), and the baby refusing to take breast milk (14%). Akram in a community KAP[27] study found that only 40.9% of the infants were breast fed. The prevalence rate of top feeding with a commercial formula was 58%, with 74% of the mothers giving the wrong dilution.

Dorothy Mull in her three studies, two of which were based on in depth interviews of mothers, and the third one on interviews of health care providers, says that mothers thought breast milk was the best food for the baby as long as the quality was good, and the quantity was enough[12]. However, many mothers stop breast feeding for certain perceived reasons. For instance, according to the mothers interviewed, several entities make the milk unsuitable for consumption. Breast feeding was stopped because the milk become insufficient or unsuitable if an evil eye or black magic spell had been cast on it, which turns the milk poisonous "zahreela," and can kill the child. New pregnancy can also make the milk dangerous, but not as dangerous as the previous cause. During maternal illness or weakness, breast milk becomes dangerous, though to a lesser extent. Transitory conditions such as the mother's exposure to cold or heat, or the consumption of certain undesirable foods, can also cause illness in the baby, was another common belief held by mothers and grand-mothers. If the baby refused to suckle, cried a lot, failed to thrive, or got recurrent illnesses, particularly diarrhoea, then the breast milk was supposedly poisonous. Temporary stopping, and the emotional stress, made the mother unable

to resume nursing.

Most of these beliefs lead to maternal anxiety, and loss of confidence, which in turn led to lactation failure, with adverse consequences for the child. Instead of seeking medical help, which is also unfortunately scarce, and often the health care providers themselves lack the right kind of information, mothers turn to "Peers" to get "taveez" or look for some supernatural force to correct these perceived maladies. In 1993, UNICEF conducted a study to learn the mothers knowledge about the "Fact For Life."[19] Almost three fourth of the respondents, i.e. 66% from Punjab and 77% from NWFP, were reported breastfeeding, and the researchers are probably referring to exclusive breast feeding here, although it is not precisely worded. About 29% of the mothers from the Punjab, and 21% from the NWFP practiced partial breastfeeding, while an insignificant number used bottle to feed their babies. When the baby remained hungry, 28% of the mothers would opt for supplementary bottle feeding, and 57% for semi-solids. Unfortunately, no reference is made to the age of the child, which makes it difficult to draw any meaningful conclusion from this information. Twenty two percent of the mothers from the NWFP said they would breast feed more, and 19% said they would increase the feeding time on the breast if the child stayed hungry, while 57% said they would opt for semisolids. The majority considered bottle feeding as harmful for the child.

Exclusive breast feeding, supplementation and other related issues

During a 24 hours recall in the MICS data[22], only 16% of the infants 0-4 month of age were fully breast fed. Breast feeding was higher in the NWFP and Baluchistan (45% in both), compared with 7% in the Punjab and 9% in the Sindh. Eighteen percent of the infants were fed on breast milk as well as bottle. Recent data from a Lahore study showed that 58% of the mothers believed infants should be fed breast milk exclusively for 4 months, 33% believed it should be continued upto 6 months. In the same study, 53% of mothers thought that young infants need to be breast fed at least 6 times per day, while the rest thought the baby should be fed on demand. Seventy seven percent of these mothers thought that breast feeding should be continued for 12-24 months, in addition to complementary feeding[28]. In the Karachi squatter areas[24], 40% of the mothers did not give supplementary milk or water for 4 months. The data from Feeding practices and Beliefs by U Kalsoom[23] showed that the major reasons for supplementary feeding practice were perceived insufficiency of milk, work load, sore nipples, weakness, tiredness and tension, while 6% of mothers did so because they were fasting. The bottle was introduced to 46% of infants during the first week, and to 84% by the 5th month. Seventy-nine percent of the infants on mixed feeding received diluted milk, as mothers thought diluted milk is "light" and hence easily digested. It is however not clear from this study as to how many infants were exclusively breast fed, considering that a large number of infants in this study were also given water as described below.

The Health Care Providers' Views Regarding Early Supplementation with Additional Water and Formula

Several western oriented Pakistani physicians were interviewed in depth by Mull[30]. They said that mothers often complain of insufficient milk. These physicians linked the complaints to TV commercials that show plump, smiling infants, which imply that bottle feeding gives extra energy. In the same study, 43% of the doctors in Karachi advised the mother to stop breast feeding during illness. In Faisalabad, 70% of the laboratory work was engaged in testing breast milk to find out if it was suitable for human consumption. These pseudoscientific suggestions and unscientific basis for milk testing can shake the mother's confidence, and reduce her ability to breast feed her child successfully[31]. In a study by Badruddin et al[24], in-depth interviews with health care providers from different areas of Pakistan, showed that they had a universal belief in giving additional water to neonates and infants. No one seemed aware of the fact that feeding water interfered with breast feeding.

Supplementation was universally offered as a solution to the insufficient milk syndrome by health care providers in Pakistan, except for the TBAs in rural NWFP. In the KAP study by NBSC[16], both mothers and fathers were interviewed from families with limited resources, but who had access to services or sources of information. In the Punjab, people believe that breast milk gave strength that lasts for forty years. Mothers were motivated by time saving, while fathers were influenced by cost saving. Breast feeding was viewed as natural, and the right of every child. Generally, it was seen as something that happened, and not something that was chosen. If mothers complained of insufficient breast milk, then those around them assumed that the lack of milk must be a problem, thus reinforcing supplementation that can decrease breast milk production. Fathers reinforce supplementation through their belief that breast feeding would spoil the woman's figure.

According to Marcia Griffith's study[15], doctors do not favor prelacteal feeds, and almost universally believe that colostrum should be given. Dais expressed an acceptance of prelacteal feeding, and an uncertainty or fear of colostrum. However, they said they can be influenced by doctors on these points. Almost all doctors believed that water was essential for the survival of the new born and young infant. LHVs and dais said they have learnt about water from the doctors. Dais and LHVs believed more strongly about mixed breast and bottle feeding, only slightly more than the doctors. There was an all around lack of information, and skills to manage breast feeding problems. Doctors considered insufficient milk a reality, and almost universally recommended supplementation. Bottle feeding was considered as good as breast feeding. They, however, believed in continued breast feeding during diarrhoea and acute respiratory infection. Even increased breast milk intake was recommended during diarrhoea but may be less so during ARI, as this ailment was thought to be due to a "cold". LHVs and dais recommended continued breast feeding but not an increase in frequency.

All health care providers were unaware of the role they could play in promoting and protecting breast feeding. Almost all care providers believed that they "educate" the mothers, which in fact meant just passing on the information, and not really "motivating". Doctors and LHVs thought mothers listened to them while dais were less sure that mothers accepted the

advice. The health care providers believed that poor women could not breast feed as observed in "Media Guidelines." Reasons for supplementation were fatigue from breast feeding, the child suffering from diarrhoea, and a negative attitude of the mother- in -law if the baby got sick or malnourished. For a mother with lactation problem, there was no reliable and convenient source to turn to for advice and counseling. This was the general observation in the workshop for me a guidelines.

Practices Regarding Complementary Feeding and Sustained Breastfeeding

In the NBSC study[16], during in-depth interviews mothers said they generally introduced semi-solid foods when the infants were 4-6 months old rather than later. In the Pritech workshop[9], it was deliberated that 50% of the mothers gave biscuits, banana, sago and Fairex. Lower middle classes in Karachi gave small dosages of egg yolk from the 3rd month, while in NWFP semisolid food is started after 6 months. In rural Punjab, according to a NBSC study, semisolids were given quite late as mothers presumed that they were difficult to digest. Other studies indicate that 68% of infants get semisolid food between 7-9 months, and 30to 50 % get only liquids. The pattern of feeding in a UNICEF study showed that 73% of the mothers would increase the caloric density by adding oil/ghee to the food given at weaning time, while this was practiced by 14% of the mothers from the NWFP. In Punjab 40% of mothers believed in giving extra food during convalescence as compared to 17% in NWFP, where 66% believed in feeding less after illness[19].

In the MICS data[22], 68% mothers were introducing semisolids between 7-9 months: 24 hour recall showed that 30-50% were getting liquids as additional food at this age.
In the Lahore study, 54% of the mothers believed 4 months as the right age for introducing semisolids, and 37% believed this to be at 6 months. The majority thought that the food should be solid or semisolid and not another liquid, and that it should be fed twice or more frequently. The majority of the mothers also believed that the child should be served fresh food, and possibly within 2 hours of cooking. A majority also thought that the child should start taking food cooked for the rest of the family between 12-24 months[32]. In another study, the mean age of introduction of semisolid food was 4.4±0.9 months. Out of these, 48% were given semisolids by the age of 4 months, while 100% of the children in the study started getting semisolid food by the age of 7 months. What they received was banana, commercial cereal food, biscuits, and sometimes milk based food like kheer, firni or custard. Choori, halwa, and meat were given mostly past the age of 5 months. Commercial foods were given more by poor families than by the upper middle class, along with eggs and fruit[23].

Summary

- Breast feeding was initiated after 24 hours of birth by a vast majority of mothers. Only one study reported immediate initiation by 36% of mothers. In the NWFP, 50% discarded a few drops of colostrum and then started breast feeding. Hence, colostrum feeding was denied for 1-3 days for reasons of its being stale or bad.
- Prelacteal feeding was practiced by 100% of the mothers. Ghutti and herbal water was

popular in rural areas, while honey and ghutti were so in urban areas.

- Because of the lack of consistency in the definitions of exclusive breast feeding, values range between 95 at one month to 63-68% at 4 months.
- Water, in addition to breast milk, was given by a vast majority of mothers.
- Early supplementation with fresh buffalo or cow milk was very common in villages, and with commercial formula in urban areas.
- Reasons for supplementation were less well known, the commonest being insufficient milk.
- The majority in rural areas breast fed upto 12 months, and 1/4 did so in urban areas. While 1/4 of rural mothers continued breast feeding upto 24 months, only a few mothers did so in the urban areas.
- Reasons for stopping breast feeding were insufficient milk or another pregnancy.
- There was a lot of variation in figures quoted by different scientists- some studies found that 36% started feeding immediately; 16% in urban and 96% in rural areas initiating after 24 hours; or rural mothers initiating at 12-16 hours, and urban mothers doing so at 3-4 hours. A delayed initiation by 2-3 days was also reported, with mothers from the NWFP initiating within 24 hours. Colostrum was discarded believing it to being stale, bad, impure, yellow and unlike milk. At the same time, in one study 100% of the mothers considered breast milk natural and pure food for the baby which gave strength lasting for 40 years.
- Prelacteal feeding was considered necessary and was given universally. Later on this changed to interlacteal feeding. Popular prelacteal feeds included ghutti, honey and herbal water, but there were at least 22 different types of prelacteal feeds.
- The prevalence of exclusive breast feeding was quoted as 64% upto the age of 4 months, and 19% upto 12 months. It was also shown to be 41% without giving the age.
- Mixed breast and bottle feeding was considered as best and essential.
- Water in addition to breast milk was given by a vast majority.
- The reasons for supplementation were the same as for stopping breast feeding. These included insufficient milk, unsatisfied child, colic development, embarrassment over breastfeeding, next pregnancy, or it being unsuitable because of the affect of an evil eye, magic or its being zahareela. Breast milk having dried up was another reason sometimes given for mothers to switch over to bottle feeding.
- Mothers initiated breast feeding within a week, the mean age at initiation was 47.4 ± 33 hours after birth. The reasons for delayed initiation were recovery from delivery, milk coming in late, unable to sit, and recovery from cesarean section. In areas where community based programmes were launched by institutions like AKU or KEMC, breast feeding was initiated within a few hours after birth, and colostrum was not discarded.
- A vast majority gave honey as the first food, and considered it a religious injunction. Less than half of these mothers also gave ghutti to cleanse the baby's system, but also gave sugar-salt solution, water, tea, herb water, gripe water, "heeng" and animal milk. Lower rates of prelacteal feeding were reported by institutions with community based projects.
- According to MICS, 16% of the infants 0-4 months of age were fully breast fed. Breast feeding was higher in the NWFP and Balochistan (45% in both), while it was 7% in Punjab and 9% in Sindh. Again in the field areas where institutional programmes were running, the rate of exclusive breast feeding was 40% till four months, or 82% in the 1st month to 23-36% between 2-4 months, a rate as high as 94% till 4 month is also quoted from one of the field studies.

- Seventy to 86% of the mothers were feeding additional water within a week after birth, and 98% by 3rd month. Mothers believed that it kept the baby cool, and quenched its thirst.

Complementary Feeding Summary

A large number of traditional weaning foods are known to mothers. Also the ingredients to make these are available in more or less every house hold. In spite of this, the following weaning practices were observed:

- Introduction of semisolid food was delayed in a majority of cases;
- The quantity given at each feed time is not well known - it was presumably quite inadequate;
- The quality according to the requirements of a growing child is not well known;
- The frequency with which semisolid are given is not known; and
- The energy density of these foods is not known.

Beliefs and Practices Related to Childhood Illnesses

Diarrhoeal illness

In Pakistan, almost all rural women, and those from urban poor areas, are essentially subordinate to their husbands and/or mothers-in-law. They are likely to be blamed for recurrent or persistent illnesses in their children, although the mothers are not, most of the time, decision makers during health or illness. Health care by mothers is a behaviour learnt over the years through observing how their sibling were cared for before they got married, and after marriage the care practices are influenced by in-laws and husbands. Health care is a non-issue in routine Pakistani life, but can become an issue in sickness. Most deaths occur in the community as a result of mis-diagnosis, mismanagement with wrong practices, or delayed presentation to the health facility, often when it is too late. Almost always, the mother is the primary care provider. She needs to be empowered with knowledge and good counseling, and to become enlightened and motivated to change her practices using modern medical technology to the advantage of her child. However, Pakistani mothers, most of whom are illiterate but otherwise quite intelligent, may not benefit so much from mass media campaigns as from direct contact with the health care providers and support groups.

Causes of Diarrhoea as perceived in the Communities

Mull and Mull studied the maternal perception of a child's diarrhoea[33]. According to them, diarrhoea was regarded as very closely linked to "heat", not measurable but rather a quality, e.g. diarrhoea can be caused if mother eats hot food, works in hot sun, has fever, takes a hot bath, or drinks hot water. The "heat" in the child that can cause diarrhoea may be fever, eating hot food, or exposure to hot weather. Fallen fontanel, evil eye sutt, and teething were also stated as common causes. Other causes stated included unclean or spoiled food taken either by the mother or the child, over eating, eating food that does not agree, intestinal worms in the child, and a new pregnancy in the mother.

Another aspect of folk etiology is that certain types of diarrhoea are considered "natural", a more or less expected part of growing up, and hence needing no therapy. There is some logic here, since most diarrhoea are considered self-limiting. Also, diarrhoea during teething, after measles, or without fever was not identified by mothers as an "illness". Since women thought that primary disease was not diarrhoea but "heat," and caused by hot food or exposure to hot weather, logically then ORS or home made SSS can profitably be stressed as having a "cooling" effect. Acceptance might be enhanced if a herb or fruit juice classified as cool were recommended as an additive to the basic solution. This is not surprising as "sikanjbeen," a traditional drink with sugar, salt and fresh lime, is used quite often in the summer and not uncommonly during diarrhoea and vomiting (the amount given is often not enough to compensate for the fluids lost during diarrhoea).

Mothers will accept ORS better if the contents are explained, and the cooling effect compared to this traditional drink. However, counseling for mothers regarding the danger of diarrhoeal diseases was considered imperative. The study concluded that large scale survey carried out in relative haste by uninterested observers would not bring out the kind of information that this study has. A rich body of shared indigenous understanding made recourse to traditional healers logical. This study also showed that while a majority of rural mothers were familiar with ORT, most were not using the therapy in an informed or effective manner. This again emphasizes the importance of proper counseling messages, and effective communication.

Another finding with important implications for ORT program was that certain diarrhoeas were classified as signs of folk illnesses requiring folk treatment. Common examples are "nazar," caused by an overly affectionate glance or by an ill intended one. "Nazar" could represent any number of potentially serious diseases characterized by fever and diarrhoea. Another perceived diagnosis is "sutt," or fallen fontanel. People make this diagnosis when they perceive that the baby is fretful, feverish, and too weak to suck which physicians would equate with severe dehydration. Then, a potentially dangerous disease like diarrhoea is treated with folk remedies. These may, with the best of intentions, compromise the health of the child.

When presented with clinical clues, 75% of the mothers recognized convulsions, but none of them associated these with infectious fever or diarrhoea. All of them said that the disease was caused by "shadow" of "ghosts" or "jinns", consequently the treatment should be spiritual rather than biomedical. If diarrhoea was perceived to be the outcome of an "evil eye," then a Pir or Molvi was frequently consulted. If it was due to sutt, then Dais or an elderly "syani" was contacted, who pushed the palate up and gave a body message. If these two were not the cause, then the majority (84%) consulted doctors, and 46% consulted Hakims. Thirty six percent of those having consulted "Pirs" said they would visit such healers "only if the doctors medicine (including ORS) didn't work". One woman made a pragmatic comment-- we go to the doctor for diseases, but we go to the "Pir" to make the child well.

Knowledge ,attitude and practices in care of children with acute respiratory infection

Hussain et al investigated the home management, use of home remedies, and care-

seeking pattern in mothers whose children had ARI at the time of study in two socio-economically different localities of Lahore, a lower class and a middle class[34]. A third group of mothers bringing their children with ARI to the out patient was also included in the study. Acute respiratory infection is generally perceived to be caused by exposure to cold i.e. "thand lagna". Mothers' perception of the extent of cure provided by the home treatment of children suffering from ARI from the three sites showed a poor belief in home remedies. Those who used home remedies thought that to fight a cold, they should feed the child "hot" food like soup, tea, egg, honey and brandy, as well as external applications to increase the body heat. Forty six percent of the mothers from the lower and 52% from the upper class thought that they would use allopathic treatment if required, 42% from both areas thought of using multiple treatment, while 96% of those coming as out patients said they would consult a doctor if there was a need in the future.

The last group was possibly motivated to use modern technology as they were already using hospital facilities. Mull and Mull[33] also found that home management of pneumonia were aimed at creating "heat" to counter the "cold effect" (thand lagna) by external application, and by giving food considered humorally as "hot". Lactating mothers were also expected to eat humorally "hot foods". A focused ethnographic study of ARI in NWFP[35] showed that mothers could distinguish between fast and difficult breathing. However, they would not consider the possibility of pneumonia in the absence of fever, poor food intake, and tiredness. After a trial with home remedies, a doctor or a local chemist was consulted. It was encouraging to note that:

- Mothers were the decision makers and care takers;
- Mothers' mobility to health care provider was unrestricted;
- Families belief in allopathic medicine was very strong;
- Faith healing was considered slow for a fast developing illness; and
- Consultation with quacks was very infrequent

  Mothers had a reasonably good understanding of signs and symptoms, except that they were not lower chest indrawing as pneumonia.

However:

- Home remedies were not consistent with clinical advice.
- Self medication was popular, and so was getting injections.
- Mothers quite often gave opium which was not seriously opposed by local doctors.

Traditional concepts about marasmus

Marasmus is another mis-understood and misinterpreted problem. Mull D.[36], in her study, interviewed 150 mothers from urban squatters in Karachi, and showed them a picture of a marasmic child asking them what was wrong with the child. Virtually all the mothers said that they had seen the problem. Seventy two percent said it was due to "saya" (shadow) from a mother who had a marasmic child, was childless, or was otherwise in a state of ritual impurity (one who had not taken a bath after menstruation or after sexual intercourse). Seven percent of the mothers thought it could be due to diarrhoea, dirt and flies, and 4% said it was God's will.

Only 2% said it was due to insufficient food, and 15% said they didn't know. The cure naturally follows the perception about the cause; hence spiritual remedies were sought. There are a large number of spiritual remedies, pilgrimages to shrines, prayers, taveez, and cultural remedies. The latter include taking a pumpkin to a holy man, so that he could bless it and then hanging it up in the doorway. The child is passed through the door daily, a number of times. As the pumpkin dries up, the child gets better because the water from the pumpkin is transferred to the child. Ritual baths are also mentioned as remedies. A person holds a sieve in front of the child's face and water is poured through the sieve. After many such baths the fontanel would go up. Thus there appears to be a folk recognition of an association between marasmus and dehydration.

Data from a recent unpublished study in 5 villages in Lahore, a peri-urban slum and an urban slum, about the mothers' preference for health care provider shows that the first choice for 80% would be a private practitioner, the second choice for 25% was a hospital, and only 1% preferred a faith healer and 1.7% a Hakim. The reason for preference was that the mothers thought the doctors had good knowledge, she was listened to, was provided good care, so she had faith in the doctor. Ninety seven percent of the mothers said they would go to the same doctor in future, while 88% said they would recommend the doctor to others. This study was conducted to learn about the mothers' behaviour in case the child developed diarrhoea or ARI. Fathers' perception of child health was studied in urban squatter settlement of Karachi[38]. Apart from their role of bread earners, most fathers participated in child care. This was evidenced by their taking the children out, playing with them, and holding them on the roads. One third of the children were brought to the doctors' clinic by the father. Fathers also helped as second line care takers. The study demonstrated involvement of both parents.

Knowledge about danger signs for diarrhoea. Traditional practices for control of diarrhoea

Child care practices and hygiene measures were studied at 6 months of age in a longitudinally followed cohort of 1476 infants born between September 1984-March 1987, in four socio-economically different areas in and around Lahore[32]. Although 76-98% of the mothers looked after their infants during health, and 96-98% during a diarrhoeal illness, child care practices and hygiene measures differed significantly between the four areas. During a diarrhoeal episode, the mothers from the upper middle class took timely help, fed ample food and oral rehydration solution to the sick child, and provided uncontaminated food to them in clean surroundings.

The mothers from the village and the peri-urban slum took their sick child to a doctor, most often on the second day of illness, but preferred home remedies. Fourteen percent of the mothers from the village, and 6% in the peri-urban slum, did not seek medical help at all. One third of the families from these two areas fed food to their children which was cooked 12 hours earlier. The surroundings were dirty with flies buzzing around throughout the year, although food was generally kept covered with a lid. A simple scoring method was developed for the immediate environment of the child as dirty, medium or clean; it was found to be associated to both parental illiteracy and child growth, but not to the housing standard. The conclusion was

that any attempt to improve child-care practices and hygienic environment for the child should focus on maternal literacy, and appropriate counseling.

Oral rehydration therapy has been promoted in Pakistan since 1983. In a study in rural Sindh during 1988, mothers were interviewed by students from AKU about diarrhoea concepts[33]. Twenty eight percent had never heard of using ORS packets for treatment of dehydration during diarrhoea, and 69% had never heard of SSS. Nevertheless, 56% stated that they had used ORS, a much higher percentage than the 9% reported from rural Punjab in a 1982 survey. Incomplete understanding of ORS was expressed by 32 women. The most common error was under use, e.g. 19% stated that the dose of ORS solution was 1-2 teaspoons, 2-3 times per day. The concept of replacing water during dehydration was hence weak. This study also exposed problems with the preparation of dehydration fluid. Several women described methods that would have yielded overly diluted or too concentrated solution. Mothers did have a positive view of home made solution as something that most of them had known about and used for years.

Khan MA in a qualitative study looked at the health seeking behaviour of mothers whose children were sick with diarrhoea[26]. While 96% used home fluids on the first day, nearly 56% consulted a general practitioner from the first to the fourth day. Glucose and lime water were preferred during the summer, qehwa during the winter, and rice water, egg white water, and ORS were used irrespective of the season. Pakistan is loosing approximately 200,000 children each year under the age of 2 years. Nearly 50% admissions in children wards of the hospital are because of diarrhoea. The GoP has launched the CDD programme since 1984 to promote the use of ORS. In order to collect baseline data on knowledge, attitudes and practices relating to diarrhoea, the mothers were asked several questions. Fifty six percent of the mothers could identify ORS and home based liquids, while 39.7 percent said that drugs were the best treatment of diarrhoea. The lowest level of correct knowledge was in the Punjab, and the highest level was in AJK. Ninety one percent of mothers knew about ORS, but only 34% used ORS: it was available at home in 27% of the cases. The respondents were asked what other treatment they dispensed to their children during the last episode of diarrhoea. Drugs were considered the treatment of choice by 34% of the mothers, 23% preferred hospital treatment, and 6.8% thought home remedies were better. The NWFP had the highest utilization of ORS (67.2 percent), followed by Sindh (36.6 percent), Punjab (28.8 percent), AJK (22.6 percent), and Balochistan (19.7 percent). If it was assumed that the children in the hospital would have received ORS, then the use of ORS increases to 57 percent. Slight differences were found among the provinces. The education of the mothers was strongly associated with the mother's knowledge of ORS.

In a study by UNICEF in eight districts of the Punjab and NWFP during 1993[38], 97% of the respondents from the Punjab, and 92% from NWFP consulted a doctor if a child was sick with diarrhoea. Forty three percent in the Punjab, and 31% in the NWFP believed that ORS would stop diarrhoea. The majority of the respondents from both provinces said they would continue breast feeding during diarrhoea, and a little over half of them said they would give less food during convalescence. In the same study, a majority of the respondents from both provinces considered pneumonia a serious illness, and preferred to go to a doctor. The study, however, does not say how many of these mothers could recognize pneumonia. Nearly one third of them said

plenty of food should be given to a child with pneumonia.

Malik I.A. and Good M.J. studied mothers' fear of child death due to acute diarrhoea in rural Punjab[39]. The study revealed that mothers regarded diarrhoea as a symptom of a number of common illness categories, e. g. diarrhoea associated with rash, inborn sickness, Saya, evil eye, fallen fontanel or loose motions due to indigestion, teething, mother's and child's diet, etc. These perceptions may have been derived empirically, e.g. the inborn sickness could be lactose intolerance or celiac diseases, the one with rash could be post measles diarrhoea, the one due to diet could be intolerance or allergy to a food item. Most of the folk lore are based on experience. Mother's response naturally differs according to what she has learnt or seen as the outcome of various categories of diarrhoeas. Since an increasingly larger number of mothers have started consulting doctors, the doctors should try to understand what is in the mind of the mother, only then can they provide effective help to the mothers. The study has shown that the maternal emotional response to a seriously ill child depends on how the mothers interpret the symptoms in a child sick with diarrhoea. Only those mothers who considered diarrhoea to be life threatening used ORS.

During 1995, a study was conducted in rural NWFP to learn about the perception of families regarding diarrhoea management[38].About one third of the women mentioned contaminated food and water as the cause, around the same proportion attributed diarrhoea to "heat," and the rest did not express any opinion. The majority of the women considered diarrhoea to be dangerous, especially in children, and thought "it can kill a child". The study showed a high level of awareness about ORS, at 85%, and a low usage rate of 25%. Nearly 3/4 of mothers knew how to prepare ORS correctly.

Continuation of liquids & food during diarrhoea

Previous studies, particularly undertaken during or before early 1980s found that the majority of mothers used to reduce or stop food and liquids when a child suffered from diarrhoea. Such an incorrect practice further compromised the health of the child. The health department launched a strong public health education programme using all the communication channels, stressing the need of continuously giving food and liquids to the child during diarrhoea. The reviews of the CDD programme conducted during the years 1988 and 1990 showed that more mothers were now continuing the food and the fluids to the child during diarrhoea. These findings are confirmed by the results of the PHES[8], as 82.% of the respondents continued giving food during diarrhoea, and 90.8 percent continued giving fluids during diarrhoea. Ninety one percent of the mothers knew about ORS, 67% used it in the NWFP, 37% in the Sindh, 28% in the Punjab, 29% in Baluchistan, and 23% in AJK. A number of hospital based studies have shown that indigenous culturally acceptable semisolid food given in appropriate quantity during an acute episode of diarrhoea and convalescence were well tolerated. These foods reduced the duration of illness, and prevented weight loss, e.g. Kitchri and yogurt, dowdo, sagodana and rice based ORS.[40, 41, 42]

In guidelines for media,[18] developed by the Ministry of Health, it was identified that there was a lack of awareness amongst mothers about the dangers of diarrhoea. Often, diarrhoea

was considered a minor illness. Only when the mother felt that the child was severely sick was he taken to a rural or public hospital. It was also identified that some mothers stopped giving 'food,' and restricted fluids during diarrhoea. Invariably, all mothers felt that a change in diet was necessary during diarrhoea, and made certain special foods which they considered as appropriate for the child during the illness. A large number of home remedies were frequently used by all sections of population, the most popular being kehva, cardamom water, aniseed water, rice water, and tea. The role of doctors identified here was of someone emphasizing drug administration to stop diarrhoea within 1-2 days. Parents also expected to receive a medicine, not so much of counseling on home made solutions. It was suggested that since the mothers play a pivotal role in diarrhoea therapy, the physician must learn how to communicate with them. As drugs are often purchased off the counter by the family, the chemists need to understand the concept of dehydration. Akram in three communications, using health education as an intervention tool in the community, reported a significant increase and change in the proper use of ORS. Appropriate methods of communication can , hence, change maternal knowledge and practices.

Khan M.A. et al[26] conducted a study on the use of home fluids in the childhood diarrhoea in Pakistan. A large majority of mothers depended upon home remedies, and a wide variety of home fluids were used for the management of childhood diarrhoea. Mothers gave home made *fluids* to counterbalance the cause of diarrhoea, which is often linked to the "heat" in food, environment or body. The decision to use home fluids was made by the mothers, followed by the grandmothers. Glucose water and lime water were the two most commonly used and preferred fluids in the first two days of the illness. More than one fluid was used during diarrhoea. In case ORS was given, it was on the advice of the doctor. Only 14% of the mothers used ORS as the first choice, compared to 39% using glucose water, and 18% lime water. ORS use was maximum on the second day at 24%, even though it was available to 89% of the families.

The ORS packets during this time period were distributed free through the National EPI programme for each child who was vaccinated. This reflects on the fact that free distribution of ORS did not necessarily motivate the mothers to use it. This has an important bearing on the social marketing of ORS by the National CDD Programme. An important finding was regarding the quantity of alternative traditional fluids used. Only a few teaspoons were given at one time for a total of 2-3 doses. The glucose and electrolyte profile of these fluids was far from physiological. Even ORS was prepared correctly only in one third of the cases. It was either over diluted or under diluted, or the water was boiled after mixing the ORS in it (this is not in agreement with the Peshawar report). The nutrition value of all the fluids would probably be very low, but the researchers think none of these fluids had any nutritional value. In the Pritech workshop, it was deliberated that mothers often reduce or withhold food during diarrhoea, perceiving that the child does not want to eat, or feeding will worsen diarrhoea. Some mothers lacked information regarding the need to feed during diarrhoea.

A study on the ORT project monitoring by the Pakistan Boy Scouts Association in 21 districts of Pakistan[38] shows that the majority of the children are taken to doctors for treatment. Seventy four percent of the doctors prescribed ORS. The majority (95%) of the parents

considered diarrhoea dangerous for the children, and showed concern regarding unnecessary deaths. An average of 75% of the parents were aware of the availability of ORS, nearly 50% of the children received ORS, 50% get the same amount, or less, of fluids during diarrhoea as during non-diarrhoea periods. In a qualitative s urvey in rural families in Mardan and Bannu in NWFP, 80 families and 22 individuals were interviewed[38]. The results showed that nearly 85% of the families had access to ORS, and the majority considered it safe. A significant number of mothers stated that, once prepared, it can be used for 24 hours. Though 78% and 67% of the population respectively knew the correct preparation of ORS, only 28% and 18% actually used ORS. The drug use rate was 57% in Mardan, and 18% in Bannu. Most of the respondents said they maintained the same amount of feeding during diarrhoea as during health, very few increased fluids, or breast milk intake. Most mothers gave semisolids like rice, banana, custard, kheer etc., water, black tea, green tea, and cows milk during an episode of diarrhoea.

A recent multiple indicator country wide survey[22] during a recall period of the previous two weeks showed an ORS use rate of 46%, and of plain water as 64%. Fifty eight percent of the children continued to get the same amount as when healthy, while 25% increased the intake. Breast feeding was continued by 84% of the mothers.

The knowledge, attitude, and feeding practices of care takers for children under 5 years of age who either had frequent diarrhoea and malnutrition, was studied in northern Pakistan. The study showed sex as a risk factor reflecting biased health care and nutrition related behaviour. Diarrhoea was more frequent if the main care taker was a grand mother. Recurrent diarrhoea was more likely in the first or second child. These results indicate the target group for appropriate health and nutrition education/motivation. In a recent Pakistan integrated household survey by the Federal Bureau of Statistics[43], around 18% of the children under five suffered from diarrhoea in the last 30 days, prior to the interviewing in 1995-96, compared to 26% in 1991 interviews by the same agency. A practitioner was consulted for approximately 86% of the diarrhoeal episodes, only marginally more than in 1991. However, in only 25% of the consultations for diarrhoea was a government practitioner consulted first. Inquiries were made to learn as to why parents were unwilling to take their children to government health practitioners. The three most commonly cited reasons were "too far away", "not enough medicines" and "staff not courteous". The proportion of diarrhoea cases where ORS was given to the child increased only slightly between the two surveys from 47% to 49%.

In a study from the NWFP[38] during 1995, both the fathers and mothers were familiar with diarrhoea and its signs and symptoms. Despite this their understanding of the etiology was vague. Close to one quarter of the fathers accompanied their families to the doctors clinic. However, taking care of a sick child was considered a woman's job. People had enormous faith in doctors. Almost all the mothers consulted a doctor for a child sick with diarrhoea. Medicines prescribed were considered the treatment of choice by a vast majority. A sizable number of women expressed no views, while a small number considered ORS to be a medicine, and would use it only on the advice of the doctor. In this study, almost all the mothers knew about Flavoured ORS, which was preferred over the plain one. The majority of the mothers continued breast feeding during diarrhoea and reliance on home remedies had decreased.

Health concepts of head, teachers, primary school children and parents

Two very interesting study has recently been reported from Karachi about knowledge of health and the health of children from two primary schools in the same locality, with different socio-economic backgrounds[44,45]. Parents, teachers, and heads were also interviewed to ascertain their perceived needs for health education of children under their care. The researchers used different methods to make a good assessment. A variety of approaches for the purposes of triangulation were used, depending on the age of the children in question. This study was conducted following the evidence that health promotion programmes are more likely to be sustained if they are based on the needs and interests of school personnel and the school community i.e. head, teachers, children and parents. It is important if all these stock holders are included in the planning, implementation, and evaluation of school health programme. The experience from this study showed that the focus be targeted on personal and environmental hygiene, healthy food, and a balanced diet at 1st and 2nd Grade students. Exercise and prevention of diseases should be focused at Grade 3, while for students of Grade 4 and 5 environmental pollution, disease prevention e.g. immunization, Oral rehydration therapy, recognizing pneumonia, and taking care of others may be focused. By time the students are in Grade 4 and 5, the programme could address issues of mental and spiritual health, developing confidence and a good sense of self esteem.

Summary:

- Ninety six to 98 % of mothers take care of the young child during illness.
- Mother's perception of causes of diarrhoea:
  - "Heat" in the humoral sense, from the food/ fluids taken by the mother or the child, or heat from the environment.
  - "Food" - over eating or bad food.
  - "Folk illness", Nazar, Saya, Sutt, etc
  - Not illness if diarrhoea is associated with measles, or teething or if the child has no fever.

Maternal perception of dehydration

- In a majority of mothers the perception of dehydration is poor.
- Some mothers have a vague idea.
- Mothers who consider diarrhoea as dangerous, have had a previous bad experience. These mothers would use ORS.

Maternal perception of Management

a) Home made fluids given by a majority of mothers on the first day (traditional folk remedies)
   - To counter balance "heat" by dispensing, glucose water or glucose lime water, aniseed / cardamom water.
   - To counterbalance cold effect in winter, mothers give kehwa, green tea or egg white water

b)
   - Give rice water, egg white water or ORS in all seasons.
   - If diarrhoea is due to "saya" or "nazar" child is taken to a Pir
   - If due to "sutt" or "Kandi-pota" a sayani or TBA is consulted, who would apply some herbal powder to soft palate and push it up.

c)
   - If the cause falls in the last category, some herbs are given, but always in small quantities

d)
   - Whether the mothers give ORS or home made fluids or even water, the quantity given is very small and not related to the degree of dehydration
   - The fluids, including ORS are given like a medicine; 2-3 times a day and 1-2 teaspoons at a time.
   - Food like fluids is also given in small quantities, a little improvement from earlier years when it was withheld.

Mothers' perception of causes of Pneumonia

A vast majority perceives exposure to cold "thand lagna" as the cause of pneumonia, while infections of upper respiratory infections could be caused by cold drinks, sour food e.g. pickles, ice cream, candies or chocolate.

Mothers' ability to recognize pneumonia:

Majority can recognize, but most often too late. Signs of pneumonia according to mothers are:

- indrawing of inter-costal spaces (by a majority of mothers).
- indrawing of sub-sternal space (by a considerable number of mothers)

Mothers' practices in management

To counterbalance "thand"

- Hot food like egg , honey or meat broth is given in small quantities.
- The concept of giving additional fluids is less known.
- External application of heat e.g. massage with warm oil, covering the chest with warm cotton, or local application of heat with a warm piece of brick or in urban areas using hot-water bottle.
- In urban areas an increasingly large number of mothers are consulting the doctor.

Mothers' perception of Marasmus

Almost all mothers in rural areas and majority in urban slums, perceives marasmus to be due to:

- Nazar, black magic, saya of ghost, jin or an impious woman. It can also be caused by mothers' milk which has become poisonous for similar reasons.
- A insignificant number of mothers from urban slums think it may be caused by insufficient food.

Maternal practices in management of marasmus is mostly

- Getting Taweez, amulet, knotted black thread to wear around the child's neck
- Bathing at a holy shrine
- Hanging a pumpkin blessed by a holy man in the doorway
- A few mothers would consult a hakim and vary rarely a doctor

Role of Health Care providers

An increasingly large number of mothers consulted doctors for the treatment of diarrhoea. However, a careful comparison shows that these consultations are only marginally more than in 1991.

Only 1/4 of all mothers consulted a doctor in a government hospital. The reasons given were:

- Govt. facilities are far away
- No medicines available
- Staff rude

Doctors , both in the public and private sector, have failed to communicate effectively and motivate mothers. This is evidenced by the enormous gap between knowledge and practices at

the community level, - 91% of the mothers had knowledge of ORS but only 34% used it. Of 84% of mothers who had ORS at home only 24% used it.

Appendix D:
Pakistan NGO Initiative (MotherCare)
Draft Behavior Change Grids
(to be revised after formative research)

Topic: Infant feeding (0-5 month olds)

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* (service barriers, poverty/lack of certain foods, attitudes/ actions of mothers, husbands, dais, etc.)
Breastfeed fully, ideally giving infant breast milk only; at worst, give only breast milk with minimal other liquid supplements until at least the 4th month	Almost all mothers breastfeed but also give water and other liquids (diluted buffalo milk, commercial formula, etc.), commonly in a bottle.	Lack of social support Belief that breast milk alone does not provide sufficient drink for baby or make baby "plump" Perception of insufficient milk due to beliefs concerning mothers' own diet and lack of understanding of sucking/milk production Beliefs that breastfeeding weakens mother, harms her figure Incomplete knowledge and negative attitudes and advice of HWs and MILs Universal use of prelacteals/strong belief in need for ghutti Lack of support for lactation management and therefore for solving breastfeeding problems (sore nipples, infections, etc.)
Increase frequency of breastfeeding during and following illness (diarrhea)	Most mothers continue breastfeeding but some reduce or stop breastfeeding	Beliefs that breast milk causes babies' illness No understanding of need to prevent dehydration
Feed frequently, 12 times in a 24-hour period.	No information	Mothers, MILs, dais, and even HWs do not understand that the more a baby sucks, the more milk the mother will produce.

Topic: Infant feeding (6-11 month olds)

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* (service barriers, poverty/lack of certain foods, attitudes and actions of mothers, husbands, dais, etc.)
Continue frequent breast-feeding but introduce soft foods by 6th month. Start with soft, mashed foods such as banana, carrot, or potato. Introduce soft foods taken from the family's food (khichri with yogurt, choori, kheer, yogurt, mashed potato, banana). Begin with a small spoonful, until the child is eating 2 spoonfuls per serving for each month of age, 3 times at day. For babies 10-11 months old, gradually introduce various solid foods. Feed the child everything the family eats, including ½ roti with each meal, and fruit. Give snacks. Continue breastfeeding.	Most mothers continue to give liquid diet, with perhaps a little roti or rice. Result is that many babies are deficient in both calories and nutrients. Few mothers give fruits or vegetables. Although many mothers believe they should give fresh food at eruption of teeth, don't give enough.	Lack of knowledge of importance of introducing non-liquid foods by 6th month. Ease of feeding liquids, particularly in bottles. Lack of knowledge concerning babies' needs in terms of calories, protein, vitamins. Lack of appreciation of role of nutrition for child growth and development. Lack of knowledge on how to gauge nutritional value of food fed. Many food beliefs, e.g. that certain foods cause diarrhea, but these may not be consistently held across communities and families.
If your baby is sick or malnourished, breastfeed more than usual and continue feeding soft foods like khichri with yogurt, yogurt, mashed potato, and banana. Add oil and vitamin foods such as carrots, mango, or spinach. Feed in smaller quantities but more times than usual (6 times a day). Give your child's favorite foods. Be extra patient and persistent in feeding the baby.	Many mothers are feeding only liquids to these babies. Some decrease breastfeeding and other feeding to sick babies, depending on what they decide is cause of illness.	Beliefs that breast milk causes some illnesses. Attitude that if baby shows little appetite, one should not insist on feeding. Traditional beliefs against feeding certain food to babies or during illness. Seasonal or general unavailability of some desirable foods.

If your baby has diarrhea, besides breastmilk and regular food, give soup, juices, rice water. Look for signs of dehydration (...) And if any seen, bring the child to a trained HW.	Most mothers follow this practice but some do not. Mothers are unlikely to become concerned about dehydration until it is severe. Knowledge of ORS is high (90%) but not use (63% ever used). Mothers do give many good home fluids (qava, water, rice, egg white, lime water in summer) and some ORS but not in sufficient quantities. Soft food given in at least some regions.	Beliefs that breast milk causes babies' illness. Belief that food will worsen or increase diarrhea. Lack of appreciation of need to rehydrate. Lack of knowledge of danger signs. Geographical, cultural, and practical (e.g.. service hours) barriers to use of health facility. Food beliefs may limit some liquids.
If your baby is not growing well or is recovering from illness (has been sick in the past two weeks), breastfeed more frequently and give soft foods more times than usual (4 or 5 times a day). Add a teaspoon of oil and a vitamin food such as carrots, mango, and spinach or other dark green vegetables to the child's food.	Mothers do not feed more food or more often.	It appears that mothers are not concerned with child growth. It appears that mothers do not know the concept of recuperative feeding, although they may well recognize that recuperating child has a good appetite. Mothers may feel they do not have time to feed more often. Mothers may not consider oil to be easily digestible. Many families may lack recommended foods.

Topic: Infant feeding (12-23 month olds)

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* service barriers, poverty/lack of certain foods, attitudes and actions of mothers, husbands, dais, etc.)
Feed the child all family foods plus fruit. Feed 4 or more meals plus snacks plus breast milk. Give at least roti plus a full cup of food every time the child eats.	Some mothers are not yet feeding family foods. Mothers are not feeding as frequently as needed. Many mothers are still breastfeeding are stopping sooner.	Mothers (and MILs) don't realize child's substantial nutritional needs for calories, vitamins, proteins, for good growth and development. Mothers too busy to prepare extra meals for child only. Mothers don't believe 12-month olds can eat all foods. Mothers think these children can choose what to eat for themselves. (?)
Even after a child is eating adult foods, he should still get breastmilk a few times per day until at least 2 years old.	This is the general practice now, but especially urban mothers are stopping breastfeeding earlier. Decline in % 18-23 month olds breastfeeding from 98% in 1970s to 53% in 1994.	Breastfeeding is inconvenient for mothers who work outside the home (urban). Bottle feeding and less frequent breastfeeding may decrease milk supply. Many urban mothers who are breastfeeding also leave at least one bottle in the evening to be fed to the baby to allow them to go out.
If your baby is sick or malnourished, feed at least 6 times a day plus continue breastfeeding. If the child is unable to eat family foods, give soft foods. Foods should include oil and yogurt, carrots, spinach or mango. Give the child's favourite foods. Be extra patient and persistent in feeding the child.	Some mothers try to feed normal amount, adding or stopping certain foods. Most mothers decrease breastfeeding or other feeding.	Lack of understanding that these babies need more food. Attitude that if baby shows little appetite, one should not insist on feeding. Traditional beliefs against feeding certain food to babies or during illness. Seasonal or general unavailability of some desirable foods.
If the child has diarrhoea: give soup, juices, rice water. Look for danger signs of dehydration (...) And if any seen, bring the child to a trained health person.	Some mothers follow this practice but many do not. Mothers concerned about the number of stools, not dehydration; only note it when severe. Knowledge of ORS is high (90%) but not use (63% ever used). Mothers do give many good home fluids (qava, water, rice, egg white, lime water in summer) and some ORS but not in sufficient quantities. Soft food given in at least some regions.	Lack of appreciation of need to rehydrate. Belief that food will worsen or increase diarrhea. Lack of knowledge of danger signs. Geographical, cultural, and practical (e.g., service hours) barriers to use of health facility. Food beliefs may limit some liquids.

Feed a child who is not growing adequately or who is recovering from illness one more time than usual (5 times a day) plus fruits plus breastfeeding. Add oil, yogurt and a food rich in vitamin A, such as carrots, mango, or green leafy vegetables to the child's food. After illness, baby should have good appetite. Continue breastfeeding.	Mothers do not feed more food or more often.	It appears that mothers are not very concerned with child growth. It appears that mothers do not have the concept of recuperative feeding, although they may well recognize that recuperating child has a good appetite. Mothers may feel they do not have time to feed more often. Mothers may not consider oil to be easily digestible. Many families may lack recommended foods.

TOPIC: Maternal anemia/iron supplementation

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* (service barriers, poverty/lack of certain foods, attitudes and actions of mothers, husbands, dais, etc.).
Attend prenatal care beginning around the 4th month; ask for tetanus immunization and iron sulfate tablets.	Few mothers attend prenatal care (70% have none), but probably more where offered by NGO. Few mothers understand purpose and need for tetanus immunization and iron sulfate tablets.	Mothers see pregnancy as normal, natural, no reason to seek care (unless problem arises). Women embarrassed by pregnancy, hide it as long as possible. Some rural mothers have difficulty getting husbands' permission or MIL's approval. Barriers to access: distance, time, cost, male providers. Lack of information on why prenatal care is important.
Obtain iron sulfate tablets	Few mothers obtain tablets in health facilities, either because do not go or facility has none; however, some mothers do get treatments for anemia symptoms in stores or chemists.	Low number of mothers who get prenatal care. Unreliable supply of tablets. Common attitude that if anemia symptoms appear, they can be cured by iron injections or medicine from the chemist. LHVs are supposed to have tablets. Do they?
Consume the tablets as directed (daily, in the correct dose, at the recommended time, with clean water or juice, not tea or coffee)	Compliance is probably low and correct compliance even lower.	Lack of (any or good) counseling. Lack of motivation/good understanding of purpose of tablets, especially if given for prevention. Side effects and lack of knowledge of strategies for handling them. Fear of a large baby/difficult delivery. Difficulty in remembering to take tablets daily. Difficult accessibility to clean water or fruits.
Continue to take the tablets despite side effects	Probably most women who suffer from side effects stop taking the tablets.	Lack of (any or good) counseling. Lack of knowledge that worst side effects pass after a few days. Lack of knowledge of strategies for handling side effects.
Keep the tablets protected from humidity and from children.	No information	Lack of (any or good) counseling/lack of knowledge of importance. Lack of plastic bags or containers.
Return for resupplies when needed.	Probably many women do not.	Lack of motivation, especially if they feel well. Barriers to access: distance, time, cost, male providers. Lack of knowledge of importance of continuing to take tablets.

TOPIC: Maternal nutrition/danger signs during pregnancy

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* (service barriers, poverty/lack of certain foods, attitudes and actions of mothers, husbands, dais, etc.)
Seek care from a health facility for major danger signs during pregnancy (bleeding, swelling of hands and feet,...)	Most mothers delay in seeking care, then seek it from dai, hakim or other local source.	Many mothers do not recognize these signs or do not interpret them as a trigger for immediate action. Many mothers are most comfortable with local, untrained providers. Some rural mothers have difficulty getting husbands' permission to seek outside care. Barriers to access: distance, time, cost, male providers.
Mothers should drink an extra glass of liquid for every breastfeed and eat more food than normal, such as chapati for energy and vegetables for vitamins.	Breastfeeding mothers often get more and special foods (esp. fat and meat), in the first 40 days. Probably need more food later. No information on whether drink extra liquid.	Harmful food taboos among older women, including some dais.
During pregnancy, mothers should eat many meals and snacks and a good variety of foods, including fruits and vegetables. Each meal or snack can be small, but the total the mother eats and drinks in a day should surpass her normal diet.	Many mothers basically eat their normal amount and may even eat less. Some mothers do increase fruits, meat, milk products. Some mothers stop eating certain foods (e.g., "hot" meat can cause abortion).	Fear that eating too much will cause a big baby/difficult delivery Many food taboos during pregnancy. Mothers' low status in the family makes it more difficult for them to get special consideration when pregnant. Intrafamily food distribution does not favor mothers. Difficult for poor mothers to obtain much variety in diet.

TOPIC: Childbirth hygiene, obstetrical emergencies, basic care of newborn

Feasible Desired Practices by Mothers	*Mothers' Current Practices*	*Main Barriers* (service barriers, poverty/lack of certain foods, attitudes and actions of mothers, husbands, dais, etc.)
Seek delivery assistance from a trained dai or health professional.	85% of mothers give birth at home, most with untrained attendants.	Strong tradition of giving birth at home. Shortage of trained providers, although better in some NGO areas. People not sufficiently motivated to seek trained person. Untrained dais have many dangerous practices; most think they can treat hemmorhage and some think it is a good sign.
Make certain that whoever attends a birth practices the three cleans: clean surface/cloth, clean hands, clean instrument to cut the cord.	Mothers have little knowledge of this recommendation or the reasons for it.	Lack of mothers' and MILs' knowledge. Lack of well trained and equipped dais. Many people consider maternal death as God's wish.
Make certain that the newborn stays warm right after the birth, both by putting him/her to the mothers' breast and by wrapping him in soft cloth.	Mothers commonly delay initiation of breastfeeding by 1-3 days. 9% start in 1st hour, mostly in hospitals. Belief that colostrum is dirty, may upset baby's stomach. [need more information on infant warming]	Lack of awareness of importance of infant warming [?] Belief that milk has not come in, so give ghutti and other prelacteals.

List of References:

1. Sanghve TG. Nutrition and infant feeding in Pakistan. Recommendations for a USA Child Survival Project. 1988

2. Nagra SA, Gilani AH. Variations in infant feeding practices in Pakistan with socio-economic stratification. J Trop Pediatr 1987;33:103-106.

3. Lambert, UNICEF, 1980

4. Ashraf RN, Jalil F, Karlberg J, Hanson LA. V, Feeding Patterns. Aeta Paediatr 1993: 390 (suppl) : 47-62

5. Kar S., Morisky D., Chaudhry S. Knowledge, attitude and practices of respondents regarding Child Care in Pakistan 1991

6. Rizvi N. and Chaudhry S. A study onf the decision-making pattern and women's role in food, health and education related behaviour. A case study of two villages in Faisalabad district. Punjab. International Food Policy Research Institute, Washington. 1988

7. United Nation's International Children Emergency Fund, Feding Practices and Perceptions in Rural Balochistan, UNICEF: Quetts, Pakistan. 1998

8. Pakistan health education Survey. World Health Organization, Ministry of Health . Government of Pakistan, Islamabad. 1991-92

9. Proceedings of workshop on Qualitative research, Nutrition Education and Child Feeding. Pritech

10. UNICEF , Complementary Food Practices and Perceptions in Rural Balochistan. UNICEF; Quetta, Pakistan.1988

11. Jalil F, Lindblad BS, Carlsson B, Hanson LA. The Immunology of Breastfeeding. Maternal and Child Care in Developing Countries. Ed Elton Kessel, Asgari K Awan. OTT VERLANG THUN. Switzerland. 1987.

12. Mull D. S, Mull J. D. Health Relief and Practices of 150-Mothers in the Rurai North and West Frontier Province, USAID, Islamabbad. 1988 (unpublished)

13. Martin L. Infant Feeding Practices of Mothers Delivered in "Teaching Hospitals". UNICEF, 1989

14. Perception, attitude and general practices related to breast feeding and other early infant feeding practices through focus group discussions by NBSC, 1990

15. Losing the ability to distinguish what is best for Pakistani children: Breast feeding - A ..adition at the crossroads. PBSC 1991

1991

17. Pilot qualitative field research on breast feeding practices of women in Punjab. AED 1994

18. Guidelines for media messages on Breast Feeding and Child Nutrition and Control of Diarrhoeal diseases, Expanded Programme of Immunization, Acute Respiratory Infections. Pritech

19. United Nations Children 's Fund (UNICEF). Knowledge Attitude and Practices of mothers about " Facts For Life". 1993.

20. Ashrraf RN, Jalil F, Khan SR, Zaman S Karlberge J, Lindblad BS, Hanson LA Impact of an intervention strategy to promote Optimal Breast Feeding practices in the communities.(Manuscript)

21. Akram DS , Agboatwalla M Shamshad S. Effect of intervention on promotion of exclusive breast feeding. J. Pak Med. Assoc. 1997;47:46-48.

22. Multiple Indicator Cluster Survey of Pakistan. Ministry of Health, Government of Pakistan. 1995.

23. Kulsoom U, Saeed A. Breast feeding practices and beliefs about Weaning among mothers of infants aged 0-12 months J. Pak Med. Assoc. 1997;47: 54-59.

24. Badruudin SH, Inam SNB, Ramzanli S, Hendricks k. Constraints to adoption of appropriate breast feeding practices in a squatter settlement in Karachi, Pakistan.

25. Ashrraf RN, Jalil F, Aperia A , Lindblad BS. Additional water is not needed for healthy breastfed babies in a hot climate.

26. Khan M.A., Qazi S.A., Rehman G.N,. Aziz A. Use of home fluids in childhood diarrhoea in Pakistan. Implications for the promotion of Oral Rehydration Therapy. 1994

27. Akram D.S. KAP Survey of a Community Based PHC Programme

28. Zaman S, Jalil F, Ashraf RN. Weaning foods, knowledge and practices of mothers in the communities. (manuscript).

30. Mull, KAP Study of Pakistani Physicians.

31. Mull S.D. Mother's milk and pseudoscientific breast milk testing in Pakistan. Soc. Sci. Med. 1992;34:1277-90

32. Zaman S, Jalil F, Ashraf RN. Mother's choice of health care provider during diarrhoea and respiratory infection. (manuscript).

33. Mull J.D., Mull D.S. Mothers concept of childhood diarrhoea in rural Pakistan: what

ORT program planners should know. Soc. Sci. Med. 1988;27:53-67

34. Hussain W., Mahmood N., Anwar M., Maqbool S. Management of acute respiratory infection by mothers in the community. J.P.M.A. 1997;47:38-41

35. Iqbal SA, Rana W.A. Focused ethnographic study of acute respiratory infections. A study of cultural response towards ARI in a Pushto speaking village of North West Frontier Province, Pakistan. 1993.

36. Mull D. Traditional perceptions of marasmus in Pakistan. Soc Sci Med. 1990:

37. Jahn A., Aslam. A. Fathers' perception of child health: a case study in a squatter settlement of Karachi, Pakistan. Health transition rev. 1995;5:191-206

38. Unicef. Pakistan Boy Scout Association. ORT project. Monitoring Report. 1995.

39. Malik I.A., Bukhtiari N., Good M.J., et al. Mothers fear of child death due to acute diarrhoea: A study in urban and rural communities in northern Punjab, Pakistan. Soc Sci. Med. 1992;35:1043-53.

40. Bhutta Z.A., Nizami S.Q., Isani Z. Lactose intolerance in persistent diarrhoea during childhood: The role of a traditional rice-lentil (Khitchri) and yogurt diet in nutrition management. J.P.M.A.1997;47:20-23.

41. Ibrahim S., Isani Z. Sagodana based verses rice based oral rehydration solution in the management of acute diarrhoea in Pakistani children. J.P.M.A1997;47:16-19.

42. Sahibzada SZ, Khan Salim, Qamar ST, Noor JA, Ahmad F, Mohamad BK, Elahi K. A qualitative study of Perceptions in rural families about oral rehydration therapy in diarrhoeal management. Peshawar, 1995.

42. Jan A., Rafi M., Rasmussen Z.A., Thobani S., Badruddin S.H. evaluation of Dowdo (Wheat-Milk gruel) in children with acute diarrhoea.

43. Pakistan Integrated Household Survey. Federal Bureau of Statistics, Government of Pakistan. Draft for Discussion. 1997.

44. Khamis K. T. Knowledge, attitude and feeding practices associated with frequent diarrhoea and malnutrition of under five year olds in village Oshikhandass, Gilgit, Northern Pakistan. 1991.

45. Khamis KT.. Health interests, knowledge and needs of Pakistani Primary school children. 1997