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Exclusive Breastfeeding Promotion:

A Summary of
EPB Qualitative
Research on
Infant Feeding



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Introduction	3
Uganda	4
Chikwawa District, Malawi	7
Kibango and Gitarama Provinces, Rwanda	8
Kazakistan	10
Senegal	12
Oyo and Osun States, Nigeria	15
Jigawa State, Nigeria	17
Nicaragua	19



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Introduction

Throughout the five-year history of Wellstart International's Expanded Promotion of Breastfeeding (EPB) Program, EPB technical staff have diagnosed causes of breastfeeding behaviors through qualitative research. Qualitative research has been carried out, in some cases in collaboration with The Manoff Group, in seven countries: Uganda, Malawi, Rwanda, Kazakstan, Senegal, Nigeria, and Nicaragua.

This qualitative research investigated local knowledge, beliefs, and practices concerning breastfeeding so that program implementors could then understand why local practices differ from biomedical concepts of optimal practices, and begin to design programs to improve infant feeding practices.

These studies were carried out as the initial step in the social marketing process—to understand the structural and socio-cultural barriers to promoting optimal infant feeding practices, as well as to identify possible opportunities to overcome these barriers. Each study included specific implications for breastfeeding promotion to design more effective and feasible program actions.

A major strategy of these studies was to work with host country counterparts in the design of the study, collection and analysis of data, and dissemination of results. Several studies provided training to build upon and improve local skills and abilities in lactation management, as well as in data collection and qualitative research techniques.

EPB has also worked with The Manoff Group to draft a manual entitled *A Guide to Qualitative Research for Improving Breastfeeding Practices*. The compendium that follows is an annex to the manual, taken for the most part from executive summaries of EPB qualitative research and edited by The Manoff Group. Full reports of EPB qualitative research as well as *A Guide to Qualitative Research for Improving Breastfeeding Practices* (in English and French) are available through Wellstart International.

Summary of Findings

The current general consensus of Western biomedical beliefs is that the following behaviors maximize the benefits of breastfeeding:

- Initiation of breastfeeding within about one hour of birth;
 - Frequent on-demand feeding (including night feeds);
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- Exclusive breastfeeding until the infant is about six months of age;
- Supplementation of breastmilk with appropriate weaning foods when the infant is about six months of age; and,
- Continuation of breastfeeding well into the second year of life, with gradual, rather than abrupt, cessation of breastfeeding.

Using these recommendations for comparison, information on local breastfeeding practices was gathered principally through focus group discussions (FGDs), interviews with key informants, 24-hour recall observations, and behavioral trials.

From this information, the breastfeeding practices that were found to impede successful lactation included:

- separation of mother and infant at birth;
- giving water or prelacteal feeds;
- delayed initiation of first breastfeed;
- discarding of colostrum as harmful to infant health;
- scheduled rather than on-demand feeds;
- insufficient frequency and duration of feeds;
- perceived "insufficient milk," leading to early supplementation; and,
- abrupt cessation of breastfeeding.

Each qualitative research study included in this compendium offers country-specific recommendations to overcome these impediments to optimal infant feeding through the development of national policies, communications and social marketing, in-service and pre-service training, and/or specific social marketing message development.

Social marketing at a national or community level, combined with training of health workers, seems essential to improve breastfeeding practices. The qualitative research recommends that training should not only teach the international norms but also the rationale behind them. It should also include substantial practice in management of breastfeeding problems and counselling skills.

Another specific recommendation is to develop culturally-acceptable social marketing messages designed to overcome specific feeding behaviors and beliefs. In general, findings indicate that messages must go beyond the advantages of breastfeeding, which is something mothers already know, and go more into how mothers can manage breastfeeding better. In response to mothers perceived milk insufficiency (an almost universal concern), increased suckling should be promoted and supplementation discouraged. Women need to be reassured that *more* breastfeeding produces *more* milk, not less.

Uganda

The Uganda Ministry of Health's interest in developing programs to address nutritional and growth problems led to an in-depth study of infant feeding practices from March to May 1993. The study was conducted by the Ministry of Health's Child Health and Development Center and Wellstart International's Expanded Promotion of Breastfeeding (EPB) Program, with funding from the U.S. Agency for International Development (USAID). Five sites representing potentially different infant feeding patterns were included: the capital city of Kampala, plus the districts of Apac, Luwero, Mbarara, and Mbale. Information was gathered principally through focus group discussions (FGDs) and interviews with key informants. The group of primary interest was mothers of children under one year of age, although FGDs with fathers and grandmothers were also held.

Breastfeeding is positively regarded in Uganda, and there are many good breastfeeding practices. Women expect to breastfeed, and nearly all women initiate breastfeeding. Mothers believe that young infants can be well nourished on breastmilk alone. Feeding bottles are not commonly used, except among urban wage-earning women. Duration of breastfeeding is also good: the great majority of children are given breastmilk throughout their first year of life.

Nonetheless, there are other practices that fall short of optimal:

- Giving prelacteal feeds (water or other liquids or foods to the neonate) is nearly universal outside of the Northern district of Apac.
- The first breastfeed after birth is sometimes delayed for one to two days.
- In Apac and some communities in Luwero, colostrum is considered harmful and is discarded.
- Although mothers believe that an infant can be well nourished on breastmilk alone, the duration of exclusive breastfeeding is often not long enough. It appears that health providers recommend supplementation at three months, and, moreover, that mothers feel that they don't have enough milk after that time to continue to breastfeed exclusively.
- There is, however, tremendous variation in the age at which supplementation begins. Early supplementation is a problem, but late supplementation is also a problem, with some children still exclusively breastfeeding at one year of age.

- There are some indications that frequency and duration of feeds may not be sufficient, although this would have to be confirmed by careful and observational study.
- Because mothers believe that frequent suckling depletes their milk supply, when they feel that their milk supply is diminishing, they give supplements. This in turn causes their infants to suckle less frequently, thereby resulting in a further diminution in milk supply.
- There is a common belief that breastmilk can spoil and that such milk is not suitable for consumption. In these cases, the child is prematurely and abruptly weaned.
- Breastfeeding is stopped abruptly when the mother learns she is again pregnant, thereby causing a nutritional and emotional shock to the child.

It appears that traditional practices are closer to the ideal than current ones. For example, grandmothers indicate that they breastfed exclusively for a longer period of time than mothers do now. Since some detrimental practices may not yet be firmly entrenched, actions taken now may reverse them with relative ease. Since breastfeeding is an part of Ugandan culture, general slogans along the lines of "breast is best" will have little impact. What is needed are messages designed to overcome the specific feeding behaviors and beliefs, using culturally acceptable means of doing so.

Because of the rural nature of Uganda's populace, the limited reach of mass media, and low levels of literacy, any communication strategy developed will have to be largely community-based. People are anxious to talk and learn about health issues. Men are surprisingly interested in issues of child health and feeding, as well as family planning, and may be willing to assume a greater role in these areas if given relevant information and specific suggestions on what actions they can take. There are community structures in place that show promise as vehicles for a communication program. However, it is essential that the community component be accompanied by training of health providers at the district and community level. They need to have (and know how to communicate) correct infant feeding information, and know how to handle breastfeeding problems. The advice given by medical personnel is influential, and the misinformation they give to mothers has contributed to the decline of the period of exclusive breastfeeding.

Chikwawa District, Malawi

The supplementation of breastmilk, even with water, during the first four to six months of a child's life has been shown to substantially increase the risk of diarrhoeal disease, and to lead to a reduction in the infant's breastmilk intake (and thus to reduced amounts of maternal antibodies). Supplemented infants have been shown to suckle with less frequency and intensity than non-supplemented infants, which ultimately results in decreased maternal milk output and increased probability of early weaning. It also hastens the chances of a mother becoming pregnant again and is wasteful of food needed by other family members.

An in-depth study of 81 women in four villages in the Chikwawa district of Malawi was conducted during October and November 1992, using anthropological and demographic techniques. The study found that virtually no mothers breastfed exclusively for any period of time. It appears that all give water from the first few days of life. Furthermore, three quarters were giving *phala* (a watery maize porridge) to their children before four months of age. About one quarter of infants were given *phala* during the first month of life.

Phala was said to be given in response to the infant crying, although observational work indicated that *phala* was not given immediately after crying episodes but rather at meal times, when it was a specific and integral part of child care. The very early giving of *phala* found in recent surveys is connected with the drought, which has resulted in mothers questioning their ability to lactate successfully and to produce enough milk to feed their infants. Mothers frequently talked of their own milk being insufficient or said that even women who are moderately malnourished are incapable of producing enough milk for their infants. The distribution of free food at many health centers to pregnant and lactating women with children less than four months of age may reinforce the erroneous view that women have insufficient milk because they are not eating enough.

Although maternal nutritional status needs to be studied further, it appears that women in this sample are sufficiently well nourished even during this difficult year to adequately feed their children on breastmilk alone for the first four to six months of life, provided their breasts are sufficiently stimulated by frequent infant suckling. Exclusive breastfeeding should be encouraged by every level of health professional during any consultation as breastmilk is readily available, free and protects the child from infection and the mother from pregnancy and is an effective way to maximize food security.

Kibango and Gitarama Provinces, Rwanda

The Rwandan Ministry of Health and the EPB Program carried out an assessment in April 1992 that looked at health facilities, policies, practices, and legal issues concerning infant feeding. The assessment revealed that many mothers are supplementing breastmilk with other liquids, a practice that is not only unnecessary but potentially dangerous. In addition, many health personnel were advising mothers to begin supplemental feeding at as early as two and three months, usually in the belief that mothers had "insufficient milk." Furthermore, in urban areas both mothers and health workers were supportive of the use of breastmilk substitutes. The assessment report recommended qualitative research which would provide information on how and why infant feeding decisions are made, and on channels for communicating with mothers and others involved in these decisions.

This qualitative research study was undertaken by the Rwandan Ministry of Health in collaboration with Wellstart International's EPB Program during July and August of 1993. It began with a review of background documents and other relevant studies. The fieldwork was conducted in the health regions of Gitarama in the central area of Kibango in the southeast part of the country. In each area, four sub-districts were selected, one of which was the urban commune. Data collection methods were as follows:

- The primary data collection method was 106 in-depth, semi-structured interviews: 73 interviews with mothers, sixteen with fathers, six with grandmothers, and eleven with traditional healers or traditional birth attendants.
- In each sub-district, the maternity ward of either the hospital (urban areas) or the health center was visited and brief interviews with post-partum women were conducted. Health personnel were occasionally interviewed as well.
- In order to obtain a general idea of the quantities and types of foods and liquids consumed, a 24-hour recall form was used for a subset of women.
- Full-day observations of eight mothers were carried out.
- Five FGDs were conducted in order to confirm reported feeding patterns and rationales for them.

- Interviews were carried out with “key informants” such as Ministry of Health personnel, USAID officials, UNICEF officials, and others.

Along with many positive practices, the study found a number of behaviors that needed to be modified:

Maternal diet. Pregnant women reduce their food intake, and lactating women have many dietary restrictions. Some nursing mothers limit water, which is believed to dilute breastmilk; avoid “hard” foods, which are believed to be detrimental to lactation; and limit fruits, which are believed to be mainly for children.

Post-partum. Newborns are given water and initiation of breastfeeding is often delayed six to twelve hours.

Demand feeding. The practice of breastfeeding only “when the child cries” needs to be replaced by frequent feeding on demand and more frequent feeding of young infants (due to their small stomachs).

Timing of supplementary feeding. Beliefs in insufficient milk, bad milk, and early weaning need to be addressed so that exclusive breastfeeding can be practiced for six months.

Weaning diet. Babies are often given liquid supplements (e.g., sorghum drink and diluted cow’s milk) before six months (too early) and semi-solids at six to nine months (too late). There is also a strong belief that babies should not eat oils and other fats, which contribute to calorie-deficient diets.

Cessation of breastfeeding. Abrupt weaning is widely practiced, particularly if a mother discovers she is pregnant again.

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Kazakstan

From March to May 1994, the Ministry of Health of Kazakstan, Institute of Nutrition, and Wellstart International's EPB Program collaborated on a qualitative study of infant feeding practices. The study relied principally on semi-structured, in-depth interviews with mothers, grandmothers, fathers, physicians, and nurses. Informants represented urban and rural areas and the two main ethnic groups: Kazaks and Russians.

Breastfeeding is a strong tradition in Kazakstan and is viewed positively. Nonetheless, health providers and mothers have an overriding concern with "insufficient milk." Kazaks attribute this problem to poor maternal diet and health. However, all cases of "insufficient milk" encountered in this study could be attributed to the specific way that breastfeeding was practiced. Breastfeeding practices in Kazakstan that impede successful lactation are:

- separation of mother and infant at birth;
- delayed initiation of breastfeeding (from one to four days after birth);
- giving water from birth;
- giving of prelacteal feeds;
- rigidly scheduled rather than on-demand feeding;
- no night feeds;
- possibly short duration of feeds;
- common use of pacifiers; and,
- frequent use of bottles.

Maternal milk supply is largely a function of infant demand; however, in Kazakstan the common recommendation for insufficient milk is increased supplementation rather than increased suckling, thereby exacerbating the problem. Mothers perceive that they have insufficient milk because their baby cries, their breasts seem soft, or they have difficulty expressing milk. Other beliefs that hinder optimal breastfeeding are the idea that breasts must be washed before feeds, that a mother should stop breastfeeding when she becomes pregnant, that it is dangerous for a mother and child to sleep together, and that milk can be "too fat" or "too watery" and needs to be adjusted through giving other liquids or foods.

Many of these ideas and practices are based on old Soviet guidelines regarding child feeding and contradict current international standards that call for exclusive, on-demand breastfeeding for six months, with continuation of supplemented breastfeeding for at least one year. The old Soviet norms are reinforced through health staff training, maternity routines and physical layouts, literature and health

education materials. Some mothers, fathers, and particularly grandmothers resist the official norms (especially scheduled feeds) and, in fact, advocate better breastfeeding practices than most health professionals. The popular resistance to counselling advice on breastfeeding has to some extent eroded health professionals' credibility.

The study revealed a great deal of information on which to base a strategy for improving breastfeeding practices in Kazakhstan.

Policies. New official policies on breastfeeding practices that are in line with international standards should be prepared, issued, and disseminated to health professionals and the public. Recommendations on the introduction of other liquids and semi-solids also need to be adjusted.

Training. The health system's close contact with virtually all mothers provides a tremendous opportunity for promoting optimal breastfeeding, but unfortunately much advice contrary to establishing and maintaining good lactation is currently being given. Thorough preservice and in-service training of all maternal and child health staff is needed. Training should not only teach the new norms but also the rationale behind them. It should also include substantial practice in management of breastfeeding problems and in counselling skills.

Communication. Communication should reinforce health professional's new training to improve their credibility. Both print materials and mass media should be used. Mothers should be reached principally through counselling by health staff and by print materials (most mothers have at least a high school education), and this information should be legitimized through selective use of mass media. Fathers and grandmothers should be reached through the same media.

Message strategy. A major theme for all target groups should be that on-demand, exclusive breastfeeding will resolve the problem of "insufficient milk" and give the baby all the nourishment *and liquid* that it needs for about the first six months of life. Messages for all should also reinforce the numerous advantages of optimal breastfeeding, including the fertility suppression benefit. For health workers, messages should emphasize the rationale for the new norms and the fact that they are the international standard. For mothers, fathers, and grandmothers, messages should emphasize that the new standards support the folk wisdom of older generations. It was originally hypothesized that fears of breastmilk contamination might prevent mothers from breastfeeding; however, no mother expressed concern about this.

Senegal

A qualitative study of breastfeeding was undertaken as the basis for developing strategies to improve infant feeding practices in Senegal. The study sites included four rural areas that encompass the five main ethnic groups in the country: Wolofs, Seres, Toucouleurs, Peuls, and Diolas. Mothers of infants were the main focus, but potential influencers—fathers, grandmothers, religious and community leaders, as well as health personnel and traditional healers—were included as well. The study was carried out in April and May of 1995 by SANAS and Wellstart International, with USAID funding.

Infant Feeding Practices

The study examined breastfeeding and its social and economic context. Among all ethnic groups, breastfeeding is highly valued. Almost all women breastfeed, most for an adequate length of time. Although these practices need to be supported and maintained, others should be discouraged: giving of prelacteal feeds, discarding of colostrum, delay in initiating breastfeeding, giving of water, giving liquids or foods before four to six months of age, and abrupt weaning. In response to women's perceived milk insufficiency, increased suckling should be promoted and supplementation discouraged. Women need to be reassured that *more* breastfeeding produces *more* milk, not less; that their milk is of good quality under all circumstances; and that it cannot spoil.

Maternal Conditions that Affect Infant Feeding

Women work very hard at home and the fields. They rarely rest: even during pregnancy they are expected to maintain their work load until the moment of delivery. At the same time, their diets are marginal, particularly during the rainy season. There is no augmentation of food intake during pregnancy, so women give birth and breastfeed without having accumulated a store of nutrients. After giving birth, they have little time to recuperate and regain strength. This overall pattern of marginal dietary intake, coupled with heavy energy expenditures, threatens women's health.

Breastfeeding is a remarkably adaptive process, and women in almost all circumstances can breastfeed successfully; however, when a woman is marginally nourished, breastfeeding begins to draw from the mother's own nutritional stores. In Senegal, what is needed is community recognition that:

During pregnancy, a woman's work burden should be lessened;

- Women have increased nutritional needs during pregnancy, and their diets need to be improved during this period;
- A longer period of rest after delivery—a minimum of one week—is needed to give a mother a better chance of regaining her strength; and,
- Time is needed between the end of lactation and the subsequent pregnancy.

Health Providers

Interviews showed that health providers lack important knowledge on breastfeeding and that they pass on little information on breastfeeding *per se* to mothers. Almost all of the twenty providers interviewed felt that breastfeeding is something natural for all women and that no special counselling on breastfeeding was necessary. Most advise women to eat better during pregnancy, but few suggest that they decrease their work loads. Most providers do believe that colostrum should be given, but some consider it bad for the infant. Most believe that maternal milk is not available “until the milk comes in,” and a significant minority believes this means waiting 24 hours or more before initiating breastfeeding. In the meantime, the vast majority counsel mothers to give sugar water to the infant.

The majority of providers have heard of exclusive breastfeeding, but only a minority believe that a child can be well nourished on breastmilk alone for three months. Most believe that water should be given to an infant from birth and that other food should be given at four months.

Health providers report that they frequently encounter complaints of insufficient milk, but very few counsel to feed more frequently to augment milk production. Most believe that the problem is due to a poor diet and excess of work. Some prescribe vitamins or medications.

Some providers insist that they have seen cases of spoiled or poor quality milk, although some say these are false problems. The majority say that they advise women to continue breastfeeding but also to supplement with a bottle. A minority advise cessation of breastfeeding.

Communication and Influencers

Mass media reaches few rural women. Most households have a radio but many lack batteries or do not work, and typically the men take the radio and women have little access to it.

In all ethnic groups, the mother-in-law and other older women exert the greatest influence on infant feeding practices. Compared with health personnel, older women are more readily at hand and their advice has more credibility. Chiefs and religious leaders do not have a direct influence, but any efforts to improve women's work situation and diet will not succeed without their support.

Oyo and Osun States, Nigeria

Wellstart International's EPB Project is providing assistance to several NGOs to improve breastfeeding and child-feeding practices in Nigeria. Wellstart contracted and worked with a research company to undertake formative research in rural and urban areas of Oyo and Osun states (southwest Nigeria) from April to June 1995 as the basis for planning activities to promote improved feeding practices.

Research methods used included: six FGDs with mothers of children under two years old, using projective techniques (reacting to pictures, etc.); four FGDs with grandmothers of children under two years old; four FGDs with fathers of children under two years old; eight in-depth interviews with program implementors (village health workers (VHWs), traditional birth attendants (TBAs), and community-based distribution agents (CBDs)); and, 58 in-depth interviews and trials of improved practices (TIPs) with mothers of children under two years old. Topics discussed included: mothers' attitudes toward program implementors; modern versus traditional feeding; concepts of child health and feeding; roles of grandmothers and fathers; and, knowledge of and constraints to adopting optimal feeding practices.

Respondents generally have very positive attitudes towards breastfeeding, feeling it is the normal and natural way to feed a young baby. On-demand breastfeeding for two years or more is the norm. Still, the research revealed many problems. Urban mothers particularly felt that it was impossible to breastfeed exclusively. Most mothers introduced water, glucose water, and traditional medicines to young babies, and a few urban mothers also gave formula. They did this because of "insufficient milk" or the positive images of these supplements (although formula itself generally has a negative image). Mothers not in contact with an active NGO health program tended to discard colostrum. At around four months, most mothers introduce thin maize pap which provides few calories or nutrients for the growing baby. Parents and even some health workers lack a good understanding of some aspects of breastfeeding and infant feeding.

The TIPs gave project planners many insights into feasible feeding behaviors and how to promote them. None of 28 children nine to 24 months old consumed sufficient calories in the 24-hour dietary recalls before the trials, but fifteen did at the end of the week-long trial. While most mothers rejected the idea of giving their babies thick pap, mothers were generally willing to add palm oil and several other available foods that are nutrient-rich. Mothers of younger babies were generally willing to cut out or at least reduce water and traditional medicines.

FGDs yielded useful information on images and concepts relevant to infant feeding. Breastfed babies were seen to be healthy, active, and robust. People thought that parents who were too "sophisticated" (i.e. not traditional) might not breastfeed and do the other things they needed to do for their babies' healthy and well-being.

Based on these findings, a training and communications strategy was developed. Radio mini-dramas, longer video-taped dramas, and counselling aids, among other media, will be employed to improve feeding practices

Jigawa State, Nigeria

Wellstart/Nigeria also worked with a research group to conduct qualitative research in Jigawa State, a Muslim area in northeastern Nigeria. Twelve FGDs with mothers, fathers, and grandmothers; eighteen in-depth interviews with mothers; and four interviews with opinion leaders were conducted in four sites representative of the state.

Breastfeeding is generally seen as essential part of an infant's diet. After delivery, infants are usually introduced to breastmilk almost 'immediately.' The concept of 'immediately' is relative, however. In the urban area, it means within the first five hours of delivery, while in rural areas, it means the next day and, in some cases, a day or two later.

Exclusive breastfeeding is rarely practiced, since the norm is to augment breastmilk with ordinary water from the beginning, irrespective of whether the baby is delivered in a hospital or at home. Some urban mothers add glucose to the water given to the child before breastmilk. However, in rural areas, a mixture of lead sediments, honey and date palm extract is the first fluid given to a child. The main reason given for this practice is the general belief that a newborn child is thirsty. Mothers do not know that late introduction of breastmilk to the child could affect its flow.

Colostrum is still widely discarded due to the belief, especially in the rural areas, that it is bad and even capable of killing babies. On the other hand, exposure and regular contacts with health workers tend to have made urban mothers to realize the importance of colostrum to the child. Apart from being perceived as nutritive, it is also believed to be 'good' in the sense that it contains antibodies against possible infections. Grandmothers and TBAs emerged as the major groups pressuring mothers to discard colostrum.

Breastfeeding for the infant's first three months is largely practiced, albeit supplemented with water. Breastmilk is not perceived as having enough water to sustain the child, because people perceive a need for constant drinking of water to avoid dehydration in the arid climate. As the child grows older, breastmilk is supplemented mainly with millet or guinea corn pap (*koko*) with groundnut paste.

Generally speaking, sevrage (completion of weaning) takes place after one or one and half years, when the child is considered old enough to be weaned. Until then, most mothers claimed to breastfeed their children about five to seven times a day on average.

No spontaneous mention of problems associated with breastfeeding was recorded. However, upon prompting, breast abscess, 'bad' milk, nipple inversion and

insufficient milk emerged as known problems, but none of the respondents claimed to have personally experienced any of them. Nevertheless, these occurrences are not generally perceived as concerns, since traditional methods of coping exist. Most mothers discontinue breastfeeding as soon as they discover that they are pregnant, for fear of harming the developing fetus.

Breastfeeding in public is widely discouraged. A nursing mother is expected to be modest by always covering herself with a veil if the need arises for her to breastfeed in public. Some fathers said they would be so embarrassed to see their wives breastfeeding 'openly' that they would not even mind their children being bottle-fed to prevent such situations.

Feeding infant formula in bottles is done only by a few working mothers. But many mothers used feeding bottles for gruel (*koko*), i.e. pap or water, particularly when going out.

Traditional beliefs are still firmly held by many families in Jigawa. Illiterate grandmothers and rural mothers were also wary of telling the names or ages of their youngest children to total strangers for fear of them dying before their 'time.' However, the literate urban respondents did not share this belief. In traditional rural families, a barber removes the young infant's uvula, which is believed to help the baby swallow easier.

Having children is usually a source of great joy to most parents. The belief that child care is the responsibility of the mother is still very strong among all community members, particularly among fathers. However, the research revealed that many fathers actively participate in such child-care tasks as bathing and feeding their children. In fact, it is now a thing of pride for a man to be involved in such roles.

On the whole, good food and cleanliness (i.e. general hygiene) were perceived as being essential for a child's good health, but poor hygiene was observed in many rural homes. Eating of foods like beans, meat, rice, and vegetables is generally believed to contribute to the healthy growth of an infant. In this regard, health workers were generally commended by mothers, who claimed to receive awareness/education at ante-natal clinics on the type of food to be given to an infant to aid its healthy growth. Interestingly, breastmilk was also perceived as being a component of 'good' food for the child, especially by the fathers and grandmothers.

Since *purdah* (the practice of confining married women to their homes) is still widely practiced, the program must design innovative ways of disseminating information. Home visits and radio are the two best channels for reaching these mothers. As mentioned, respondents also widely trust health personnel for giving reliable information on health issues relating to their children.

Nicaragua

Wellstart EPB consultants and Ministry of Health of Nicaragua staff undertook a qualitative study of breastfeeding in urban and rural areas of two of ten health planning zones (Managua and Matagalpa) during the summer of 1995. The principal method used was twenty FGDs, but there were also TIPs involving 21 mothers and a small observational study of health education in MOH facilities. The objective was to gain more in-depth information on breastfeeding knowledge and practices to prepare a communication strategy to promote improved breastfeeding practices.

Through the FGDs, researchers hoped to describe practices, attitudes, beliefs, and values related to optimal breastfeeding practices among grandmothers and mothers of children less than a year old: housewives who were breastfeeding predominantly or partially; women who work outside of the home; and, first-time mothers. (So few mothers were exclusively breastfeeding that it was not practical to recruit groups of them.) The discussions also focused on identifying facilitating or inhibiting factors to optimal breastfeeding.

Staff of local health facilities recruited FGD participants. In Managua, twelve groups in three rural areas and three urban neighborhoods were recruited. In Matagalpa, eight groups were held in seven rural communities.

The findings indicated that among the study population, there exists a positive "culture of breastfeeding," but it does not include the concept of exclusive breastfeeding. In the city, and to a lesser extent in rural areas, people also place high value on bottle feeding and other liquid feeds for babies, which most mothers introduce shortly after childbirth. In the city (at two to three months) and in the countryside (at three to four months), mothers prematurely introduce other foods, believing that this will benefit both the baby and the mother. Mothers are unaware that they are able to increase their milk production simply by more frequent feeding and believe that to breastfeed better they would have to eat much better. For this reason, their perception of their own poor nutrition acts as a barrier to exclusive breastfeeding.

Working mothers, many of whom work in the informal sector, have devised various strategies to continue breastfeeding, including working at night, working part-time, and receiving permission to take breastfeeding breaks. Many urban grandmothers are actively involved in child care, although some mothers do not follow their advice. Fathers have little involvement in child feeding. They feel a sense of responsibility for purchasing food for their wives/companions and milk for the baby, but doing this is difficult due to limited financial resources.

Mothers said they receive a lot of advice in health facilities. Some follow it but others are confused by it.

The FGD findings indicate that the positive culture of breastfeeding should be reinforced, especially in the city, where it competes most directly with the culture of infant formula. Some important elements for messages to promote exclusive breastfeeding are: the argument that families should spend a little money on purchasing more food for the mother rather than a lot of money on infant formula and that mothers can have control over their breastmilk production. The understanding of mothers, fathers, and grandmothers concerning mothers' diets needs to be changed. Messages need to be concrete, e.g., that the nursing mother needs to eat two extra tortillas and drink a cup more at each meal. The findings indicate that messages must go beyond the advantages of breastfeeding, which is something mothers already know, and go more into how mothers can manage breastfeeding better.

Mothers' success in following the recommended practices in the behavioral trials (TIPs) was quite mixed. The success rate was the following: eight of eleven stopped giving water, eight of eleven increased the number of breastfeeds and reduced the number of bottle-feeds; seven of eight fed from both breasts on demand; three of six stopped giving watered-down fruit juice (*frescos*); zero of three extracted breastmilk; and, zero of two stopped buying powdered milk and used the money to buy more food and drink for the mother. The trials yielded a great deal of information on the mothers' feelings on the benefits and difficulties in following the recommended practices.

In the observational study, a researcher observed counseling to mothers on infant or maternal health in five health centers or posts in Managua. It was observed that health staff gave mothers scant information or advice and that there was little or no dialogue. Some staff treated mothers discourteously. Group health education talks were given infrequently and were judged to be ineffective. In sum, health workers lack training, motivation, materials, and other support to be more effective educators/counselors, problems which any project that relies on them will have to address.