Patterns of Maternal Beliefs Affecting the Duration of Breastfeeding in the Central and the Northeast of Thailand.

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December 1990

This project is supported by Task Force for Social Science Research on Reproductive Health, Special Programme of Research, Development and Research Training in Human Reproduction. World Health Organization

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Abstract

This study describes maternal beliefs affecting the duration of breastfeeding in the Central and Northeast regions of Thailand. In obtaining research data, several qualitative techniques were employed, including participant observation, in-depth interviews and focus group discussions. The respondents were married women of reproductive age and the community leaders living in Sakonnakhon Province (Northeast region) and Ayudhaya Province (Central region). Study results indicate that although breastfeeding is widely practiced among mothers in both regions, misunderstandings about the quality of breast milk still remain among breastfeeding mothers. Concerning mothers who have delivered at home, certain beliefs concerning breastfeeding and food taboos exist which are strongly influenced by traditional birth attendants, neighbors, relatives and also parents. Mothers also pay more attention to psychological factors as determinants of breastfeeding duration. Weaning patterns are defined by infant life cycle (age) stages and norms regarding child growth and development, with infants being fed a variety of foods. In addition, certain contraceptive methods affect the duration of breastfeeding through their association with potential side effects.

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CHAPTER 1
INTRODUCTION

1.1 Background

This study describes the cultural beliefs associated with breastfeeding duration among women in rural Northeast and Central Thailand. For rural Thailand in general, breastfeeding's median duration slightly exceeds a year and a half, while it is only four months for urban women (Kamnuansilpa and Chamratrithirong, 1982). Moreover, regional differences in breastfeeding patterns are also evident, in that the practice is most common and of longest duration among women residing in the Northeastern region of Thailand. In the nation's Central region (excluding Bangkok), it is least common and of shortest duration.

Many prior studies have investigated breastfeeding patterns or infant feeding practices, but relatively little is known about breastfeeding duration in relation to cultural beliefs. This is a marked discrepancy, since the identification of cultural beliefs which affect breastfeeding duration, within and between the above two regions, is of special importance for infant nutrition, maternal and child health, and individual and community health education programs. It is particularly important for a greater understanding of malnutrition among infants and young children.

This study is based on rural rather than urban areas mainly because rural women are more likely to breastfeed for a longer period of time than their urban counterparts. Yet, malnutrition's prevalence among infants and preschool children in rural Northeast Thailand is high, i.e., 26.08% (first degree)* , 3.54% (second degree)**, and .09% (third degree).*** For the Central region though, these

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* 1st degree mild malnutrition;

** 2nd degree moderate malnutrition;

*** 3rd degree severe malnutrition

rates are comparatively lower: 10.52% (first degree), .51% (second degree), and .02% (third degree), respectively .

Malnutrition's determinants are numerous and include lack of knowledge among mothers about appropriate infant feeding, improper food supplementation, and inadequate food intake during pregnancy and lactation (Durongdej, 1983). Consequently, the prolonged duration of breastfeeding, in and of itself, does not always imply a lower incidence or prevalence of malnutrition as noted for Northeast Thailand. Rather, other cultural factors of greater significance may be operating in conjunction with breastfeeding and which have a direct affect on the emergence of malnutrition.

1.2 Objectives of the Study

This study explores the inter-relationship of traditional beliefs held by Northeastern and Central Thai women, on the one hand, and the duration of breastfeeding, on the other. The specific objectives are : 1) to examine the beliefs of Thai women about breast milk, breastfeeding, infant feeding and weaning practices; 2) to investigate the influence of such beliefs on duration of breastfeeding among Thai women in the Northeast and Central regions; and 3) to provide guidelines for improving maternal and child health programs (MCH) in Thailand.

1.3 Applicability of the Study Results

Study results are potentially useful for governmental maternal and child health administrators, at all levels, who are responsible for planning and implementing appropriate MCH Programs in the Northeast and Central regions of Thailand. They will also assist in highlighting the need to understand prevailing patterns of breastfeeding in other Thai regions and provinces. Study results will

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1 Division of Nutrition, Department of Family Health, Ministry of Public Health, 1983.

also facilitate local health workers in identifying relevant health beliefs affecting breastfeeding, its duration and infant feeding patterns in order to implement more appropriate and effective health education measures where necessary. In addition, findings will aid private non-governmental agencies to plan programs connected with MCH in these areas.

1.4 Literature Review

Broadly speaking, breastfeeding is universally accepted by all societies and cultures as a suitable infant feeding method. Ingun (1982:769) has suggested that infant feeding patterns, in and of themselves, are culturally determined. For example, Harfouch (1970:162) has pointed out that the Holy Koran provides followers of Islam with the recommendation that "mothers should breastfeed for at least two years". Indeed, evidence shows that Muslim women in Bangladesh do breastfeed their children for an average of 30.7 months. (Reinhart, 1981:533)

General beliefs about breastfeeding, and which influence its duration, are readily classifiable. One set of beliefs relates to the milk itself. In some cultures, women believe that semen will poison the breast milk if the couple has sexual intercourse while the woman is lactating. Thus, breastfeeding's duration correlates closely with the duration of postpartum abstinence (Kleinman and Senanayake, 1984; Singarimbun and Manning, 1976). In Papua New Guinea, mothers with urban, non-traditional lifestyles tend to stop breastfeeding for about three months after delivery in favor of bottle-feeding, so that they can resume sexual intercourse (Kleinman and Senanayake, 1984). Some women in Yemen believe that if they become pregnant while breastfeeding, their milk will be poisoned. Consequently, they will stop breastfeeding upon becoming pregnant (Myntti, 1979). Fernandez and Guthrie (1984: 991-995) noted that Filipino women in their study believed that if a mother spent several hours in the sun, her breast milk would become stale and unsuitable for their child. In view of this, mothers tend to stop breastfeeding early when they return to working out-of-doors. Fernandez and Guthrie (1984) also stated that some women will stop breastfeeding upon the birth of a new child. This

is because they believe that the second child will become sick and die if they try to feed both children simultaneously.

In addition to these beliefs, feelings of the mother also play a role in affecting the duration of breastfeeding. Fernandez and Guthrie (1984) found in the Philippines that if women feel angry, grievous or ill they will stop breastfeeding. They believe that these ill feelings will be transferred to the baby through their breast milk. Morgan (1976) and Myntti (1979) also state that some women believe that breastfeeding will adversely change the shape of the mother's breasts. Hence, the women may turn to bottle-feeding as opposed to breastfeeding. This belief may be more important to fashion-conscious women in modern society.

Previous research has suggested that breast milk alone is usually sufficient for infant health until the age of four to six months, provided the mother is adequately nourished (Rienhart, 1981). However, breastfeeding for more than six months does not assure that the infant will remain healthy; therefore mothers should supplement the infant's diet with other foods.

In addition, breastfeeding also affects the time between subsequent births (birth spacing) (United Nations, 1973; Rosa, 1976; Knodel, 1977, 1980; Ferry and Singh; 1980). Douglas (1950) and Gioiosa (1955) both found that only half of the nursing mothers they studied became pregnant while breastfeeding (cited in Harfouch, 1970). Even though it does not prevent pregnancy 100 per cent, prolonged breastfeeding does aid in protecting against the onset of new pregnancy by delaying the return of ovulation during the post-partum period (Nag, 1980). Breastfeeding, therefore, may provide a natural, biological means of spacing births where active use of contraceptives is not condoned or where they are not readily available (Yoddumnern, 1985)

1.5 Summary of the Results

Breastfeeding is widely practiced among mothers in Northeast and Central Thailand. Maternal beliefs regarding the quality of breast milk, the provisioning of supplementary food, as well as psychological factors associated with breast milk are basically the same between the Northeast region and the Central region. However, maternal food habits do vary, mainly due to differences in locally available foods and dietary customs/regimes. Many types of maternal beliefs also affect breastfeeding duration either directly (such as observations of the breast milk) or indirectly (by food restrictions). In addition, bonding between mother and child plays a role in prolonging breastfeeding in both regions. Nevertheless, misunderstandings about the quality of breast milk affect breastfeeding duration among mothers in both regions, especially for mothers have had home deliveries. Traditional birth attendants, cousins, relatives, neighbors and friends also affect the decisions of breastfeeding mothers.

No specific age is associated with weaning, however respondents noted that the longer children are breast-fed, the more difficult it is to wean them. Weaning may occur with varying degrees of abruptness and involve either actual geographic separation from the mother (i.e., when the young child is sent to stay with a relative) as well as the use of deterrent substances on breast. For women in both regions, their main reason for not giving children certain foods during weaning is the fear of endangering a child's health.

Breastfeeding is also considered to be a contraceptive method among mothers in both regions, but mothers do not rely on it because of its perceived high failure. In addition, contraceptive side effects were viewed as obstacles to milk production. For mothers needing a contraceptive method, they either stopped breastfeeding or utilized non-hormonal methods such as an IUD.

1.6 Organization of the Report

This report is composed of five chapters. Chapter 1 comprises the study's introduction and includes detailed information about the project's background and objectives, the applicability of study results, and information on prior relevant research. Chapter 2 describes the research project's location and methodology, as well as training procedures, fieldwork operations, respondents and interviewers. Chapter 3 describes the research setting, while chapter 4 discusses the study's specific results. For the latter, discussion centers on the topics of child caretaking, quality of breast milk, supplementary food usage, maternal and child food habits in relation to food taboos, psychological factors which focus on mother and child bonding, and also psychological characteristics and adversities of breast milk which may affect a mother and child. In addition, weaning patterns are discussed in terms of infant life cycle (age) stages, as well as how breastfeeding duration may be affected by some contraceptive methods. Chapter 5 concludes the report with a summary of the study findings and recommendations for policy implication.

Chapter 2
METHODOLOGY

2.1 Locations and Methodology

The research was conducted in eight villages, four each in Northeast (i.e., Sakonnakhon Province) and Central Thailand (i.e., Ayudhaya Province). Within each village, the research investigation adopted a qualitative data collection approach containing three main phases: 1) participant-observation with informal interviews, 2) in-depth interviews; and 3) focus group discussions.

This qualitative approach is complementary to a quantitative analysis in exploring people's beliefs, perceptions, and attitudes. Its main intent is to determine specific underlying beliefs, attitudes, and behavior patterns of the informants and the processes by which they come to bare on breastfeeding. Concerning the specific techniques, focus groups offered the chance to observe participants engaging in interaction that is concentrated on attitudes and experiences of interest to the researcher (Morgan and Spanish, 1984). Participant-observation and in-depth interviews were used to cross-check as well as to supplement data obtained from focus group sessions.

2.2 Training Procedures

To undertake this study, four research team members were recruited, each of whom possessed a Bachelor's degree in one of the social sciences and were able to speak the local dialect. Prior to the actual fieldwork, one week of intensive training was held so that everyone involved knew exactly what were the study's objectives. In the training period, a brief field study was undertaken to familiarize the research personnel with the study's methodology and data collection instruments. After this stage, a few days were set aside for discussing problems and improving the study instruments.

2.3 Fieldwork Operation

During fieldwork, the research personnel were divided into two teams. The first team was assigned to take responsibility for collecting in-depth interviews from key informants (community leaders, village headman, health personnel, and selected women). Another team carried out the focus group sessions as well as additional in-depth interviews. Both teams were closely supervised by the principal investigator.

2.4 Respondents

Two sets of respondents served as the study population, namely, community leaders and married women of reproductive age. Eight community leaders (one per village) were interviewed to determine general information about the research communities. Eighty married women of reproductive age who were breastfeeding or had ever breastfed in the past, were interviewed in-depth. Eight focus group sessions were conducted with fifty-six women, with each session comprising seven women aged between 15 and 49 years.

2.5 Interviewers

The interviewers were encompassed the four research assistants noted above. In addition to being trained in research methodology, they were also given instruction in topics related to breastfeeding, infant feeding and weaning practices.

Chapter 3
RESEARCH SETTING

3.1 Sakonnakhon Province, Northeast Region

The four research communities in Sakonnakhon Province are Don- Doo, Kam-Mek, In-Plang, and Pun-Na, and each has been in existence for over 50-100 years. A vast majority of community members have migrated from one village to another within the region because of drought and severe epidemics. (No specific statistics are available; this information was obtained from key informants and community leaders). Whenever drought or epidemics happened, a leader organized the people and thereafter they moved elsewhere to establish a new community, often near a forest and a reliable water resource.

3.1.1 Location and Transportation

Each of the four communities is approximately 80 kilometers from the provincial capital. However, a main road which extends to other provinces (e.g., Udonthani and Nong-Khai) also passes through these communities. Within the villages, motor-cycles and mini-buses are available from early morning to evening for people who wish to travel to surrounding towns. People in the village are thus able to readily communicate with each other and members of other communities through this transportation system. Goods and foods are available from larger towns as well as the community, and they are often secured from village vendors.

3.1.2 Religious and Customary Beliefs

People in these communities are Buddhist, with this religion's beliefs and practices being adhered to especially at various ceremonies such as the weekly sabbath, the commencement and ending of Buddhist Lent, and the Thai New Year Celebration (Song-kran festival), amongst others. Apart from Buddhism, a founding ancestor spirit shrine (Sann-Pu-Ta) exists in every community. This

spirit is propitiated at the start of the cultivation season, whenever an important business decision needs to be made, and before a community member leaves the village for a length of time. Propitiation is done through the offering food, fruit and beverages in order to increase one's fortune and good luck as well as to secure the happiness of family members.

3.1.3 Health Services

A health station is located in one community under study (Pun-na), while members of the other communities must seek services from nearby villages. Reliance on self-medication and traditional practitioners predominates in communities where other health services are not available. Most pregnant women deliver at home and call upon the services of traditional birth attendants. Whenever delivery complications are foreseen, women will go to a health station.

3.1.4 Economic Status and Population Size

The vast majority of people are farmers, who cultivate non- glutinous and glutinous rice for home consumption rather than for sale at local markets. Most household income derives from agricultural wage labor and/or the cultivation small vegetable farms.

The four communities of Don-Doo, Kam-Mek, In-Plang, and Pun-Na consist of 300, 150, 130 and 26 households, respectively. The total population is approximately 3,400. Since these villages are rather remote, they are generally smaller than communities with better communication and transportation systems. Additionally, these communities are rather "young" (as compared to others established over 400 years ago). Their growth rates over time are also slower, because many newly established villages are comprised mainly of young couples.

3.2 Ayudhaya Province, Central Region

Since the Central Plain has many rivers and canals, these areas are more suitable for intensive, year-around cultivation. The characteristics of the four research communities (Muu-Tan, Ban-Koh, Ladd- Nga and Nong-Sroung) are completely different from the Northeastern communities. All are currently located nearby waterways and were established several hundred years age. (Ayudhaya province was the center of one of Thailand's early capitals). Most people are descendants of original community settlers; inter-community migration usually only occurred after marriage and most often by males. Presently, the majority of people -- especially the youth -- migrate to Bangkok in order to work in factories or for other career pursuits. Most key informants stated that all of the people moving out from the communities did so because they had a better chance to earn more income in Bangkok than they do at home. Consequently, the female population in the research communities is composed mainly of women who are 50 years of age and over as well as those below 15 years, with relatively few women of reproductive age remaining in the community. Working age men show a similar pattern in that, if at all possible, they will seasonally migrate to other areas for work. Hence, persons over 50 years or under 15 years are more permanent residents than those aged 15 to 50 years.

3.2.1 Location and Transportation

The communities are approximately 20 and 40 kilometers from the provincial city center. In the past, people communicated with each other using waterways, but currently roads are a more accessible means of transport. Many roads, however, are in poor condition, and waterways are still used whenever possible. Mini-buses are also available every day of the week for people who wish to travel to markets in nearby towns.

3.2.2 Religious and Customary Beliefs

People in four communities under study are Buddhist and practice this religion in a manner similar to Northeastern Thai people. Most households have and propitiate their own guardian spirits so as to ask for blessings and protection from all evils outside the home.

3.2.3 Health Services

A health station is located in a nearby community under study and its use can be distinguished into two ways. First, people will go for assistance when they have an accident or a minor illness. In addition, the governmental health service referral system requires them to go to the local health station before going on to the community hospital. Since these communities are located relatively near to the nation's capital, most people seek better services and treatment from hospitals in Bangkok when they become seriously ill. For child delivery, almost all women have given birth in large modern hospitals in Bangkok, namely Promongkrut-kao and Rajvithi hospitals.

3.2.4 Economic Status and Population Size

Most of people are farmers who grow non-glutinous rice and supplement their diet by fishing. Since Ayudhaya is located near Bangkok, community members work in factories usually after the harvest season. Such workers may commute daily to the factories (often via rail transportation) or rent houses near the factories. During the planting and harvest seasons, they return to the community. Extended families are common in the research communities where grandparents assume the role as child care- takers, while the children's parents are working either in the field or factories.

According to census data, Muu-Tan, Ban-Koh, Ladd-Nga and Nong-Sroung consist of 50, 35, 50, and 50 households respectively, with a total population of about 1,150 persons.

Chapter 4
RESULTS AND DISCUSSION

In this chapter, salient findings are presented under seven general categories, namely: (1) childrearing patterns; (2) quality of breast milk; (3) use of supplementary foods; (4) maternal food habits; (5) psychological factors; (6) weaning patterns; and (7) breastfeeding as a contraceptive method.

4.1 Childrearing Patterns

Generally speaking, childrearing patterns and characteristics with reference to breastfeeding can be divided roughly as follows.

4.1.1 Neonatal

For babies delivered either at a hospital, health station or at home, mothers will begin breastfeeding during the first few days after delivery. For breastfeeding babies born at home, traditional birth attendants and older family members encourage the mother to squeeze out the colostrum, since they believe that it is rotten milk.

4.1.2 Breastfeeding

During active breastfeeding, mothers always attempt to increase milk supply through the use of several kinds of traditional herbs as well as traditional Thai and Chinese medicines.

4.1.3 Artificial Feeding

Sweetened condensed milk is a commonly used breast milk substitute in both regions either when a mother does not have enough milk, when she is ill, or pregnant. In addition, child caretakers (especially grandmothers) give infants

sweetened condensed milk as a substitute until the mother returns from working outside the home.

4.1.4 Supplementary Foods

Supplementary foods are introduced at very early ages in both regions. In the Northeast region, mothers give infants roasted, pre-masticated glutinous rice beginning as early as 2 days or 3 days after delivery. For the Central region, mothers supplement the infant's diet with mashed banana or mashed rice in addition to breast milk.

4.1.5 Other Foods (Animal and Vegetables)

Almost all mothers in both regions introduce other foods as soon as the infants have teeth. These foods almost always consist of locally available products such as fish, chicken and vegetables.

4.1.6 Weaning

The age at which a child is weaned depends upon either the child's growth or the quality of breast milk. Several methods for abrupt or gradual weaning exist, including sending the child to stay with relatives or placing deterrent substances on the mother's nipples.

4.1.7 Person Responsible for Feeding

Mothers, grandmothers, older siblings and female relatives are responsible for feeding the children in both regions, depending upon occupation and availability.

4.2 Quality of Breast Milk

4.2.1 Biomedical Features

A. Immunological Effectiveness

In considering breast milk's immunologically effects, mothers in both regions agreed that human milk is supposed to prevent frequent child sickness. As noted in focus group sessions,

> *I believe that breastfed babies are healthier than bottle-fed babies. I myself breastfed my babies. They had hardly any sickness and were in good health. I always see bottle-fed babies who are frequently sick. Most of them must visit a health worker because of fever, stomach aches or diarrhea" (Northeast mother).*

In general, mothers feel that breast milk is clean and safe for a baby. Mothers in the Central region also noted that high quality breast milk is a good treatment for pink-eye.

> *"I often squeeze my breast milk into my friend's eye when she has pink-eye".*

B. General Health Promotion

Breastmilk is also thought to promote child growth and development. Informants noted that breastfed babies are able to stand and toddle at an earlier age than bottle-fed babies. Moreover, breastfed babies appeared to be more intelligent than bottle-fed babies in the eyes of many mothers. Central region mothers said that breast milk is rich in vitamins and, therefore, it can make children strong and fat.

"My friend's baby could stand and toddle within 7 months".
"My baby could climb up and down a ladder in my house when she was 9 months".
"My baby could begin singing a song when she was one year".

4.2.2 Sensory Characteristics

A. Color

Mothers in both regions had similar beliefs about the color of breast milk. According to these women, when breast milk is cloudy white, the quality is good. On the contrary, when the breast milk is clear the quality is poor. Some mothers in the Northeast believe that the longer they breastfeed, the clearer the color of the breast milk. A child being fed by this kind of breast milk will be poor in health.

"I should suddenly stop breastfeeding whenever the breast milk is clear". (Northeast mother)

After the mother terminates breastfeeding, a child may be fed sweetened condensed milk or other supplementary foods. Mothers also reported that at this time a child could eat regular foods like an adult. In addition, mothers observed that whenever they became pregnant or were in poor health, their breast milk would be tasteless and clear. They also explained this belief in terms of supernatural powers.

"A mother who becomes pregnant must terminate breastfeeding because both baby and fetus will be endangered; they have to fight each other to suckle. There will be the winner and the loser, the latter will be weak or may die". (Northeast mother)

B. Taste

During focus group discussions and interviews, mothers in both regions were asked about breast milk taste. They noted that when breast milk is cloudy white, it is sweet and of good quality. If mothers prolong breastfeeding more than one year, the breast milk becomes clear and tasteless. They also stated that whenever a mother became pregnant with a subsequent child, the breast milk also became clear and tasteless. Whenever it is tasteless, the mother will terminate breastfeeding.

4.2.3 Colostrum Factors

A. Color (i.e., yellow) Promotes Colostrum Rejection

In general, women in both regions believe that colostrum ("yellow milk") is rotten, and should be squeezed out. If the children are fed with that kind of milk, they will develop stomach aches or diarrhea. This same idea is also applied to the milk of mothers who work in the sun for a long period of time. Thus, it becomes a customary practice for mothers who return from the field to clean their body, and their breasts in particular, and then squeeze out some breast milk before breastfeeding their children.

> *"A few days after delivery, the yellow milk came. It was a little bit salty tasting, so I squeezed it out; it was rotten. My parents always told me that if a child eats this yellow milk it will get stomach ache and diarrhea." (Northeast mother)*

> *"Whenever I go out to the field and work in the sun, I have to take a bath or clean my breast with cold water and squeeze the yellow milk out. After that I will begin breastfeeding." (Central mother)*

B. Helath Station Deliveries Promote Colostrum Use. Home Deliveries, Conducted Especially by Traditional Birth Attendants, Discourage Colostrum Use.

Place of delivery affects beliefs and practices about colostrum. Those mothers with health station deliveries tended to give colostrum to their children according to health personnel guidance. Mothers with home deliveries, however, tended to squeeze the colostrum out at the recommendation of traditional birth attendants. The latter stated that the milk was rotten because it had not flowed for over nine months (during pregnancy) and it would not be good for the baby. In contrast, health personnel suggested giving colostrum to the baby because of its laxative effect in clearing meconium from the bowels. Moreover, the greatest benefit of colostrum is the accumulation of antibodies in the baby (Hotchner, 1984)

Regarding age of respondents, a few Central region mothers under forty years of age feed a baby with colostrum. They also prepare for breastfeeding by cleaning their nipples with water in order to eliminate nipple clotting (perceived as an ache in the nipples) which is believed to obstruct milk flow. Here are the discussants' views on the above subjects.

I give colostrum to my baby because the colostrum can clear meconium".

"Health workers suggested me to give colostrum to my baby because it has immunological effects".

"I gave birth at home. The traditional birth attendant told me to squeeze away the yellow milk over the first few days because it is rotten. So that's what I did."

4.2.4 Nutrio-Cultural Mix

A. Right Breast and Left Breast Distinction

Several beliefs concerning breastfeeding still exist in Thai society and these are usually transmitted to younger generations via parents, grandparents and other respected people. Beliefs are often accepted on faith without questioning or proving their validity. Although various beliefs are supported by scientific knowledge, some are still vague. In particular, people tend to believe in supernatural powers if they can not overcome persistent problems, and it is not uncommon to witness the influence of several beliefs on health and illness decisions, particularly when they are expressed in rituals.

Influence of beliefs on breastfeeding duration is particularly evident in terms of child growth and development. According to mothers' beliefs, a baby under one year of age is supposed to be poor in health and still requires breast milk for its growth. Additionally, mothers in both regions still believe that breast milk from the right breast represents rice, while if it is from the left breast it represents water. They also clearly explained that either regular non-glutinous rice or glutinous rice are Thailand's super-cultural foods; a baby should thus be fed with both breasts, that is with rice and water.

In sum, the perceived quality of breast milk affects breastfeeding duration. As long as mothers know the breast milk is cloudy white and also sweet, they will prolong breastfeeding. In contrast, clear and tasteless milk is poor quality, and they are not willing to give it to their babies because of a perceived lack of vitamins and immunological effectiveness. Nevertheless, misunderstandings about colostrum remain as long as mothers still deliver at home.

In addition, mothers who live with their parents and relatives are often influenced and controlled by these people in terms of child nutrition. This control stems from the religiously- and socially- sanctioned belief that older persons,

especially parents, must be obeyed. Due to increased age and experience, their knowledge is perceived to be greater than the mothers, and at least on an empirical basis, greater than that of some "younger" health workers. Health education, therefore, must cover not only child bearing women, but their older female relatives as well. It must also take into account age and status differences in developing and implementing effective communication strategies.

4.3 Supplementary Food Usage

4.3.1 Ease of Preparation Promotes Use

Supplementary food does not necessarily mean milk from a bottle, even for infants younger than three months of age. It may also include solid food, usually a starchy, cereal porridge, sometimes enriched with fat, a protein-rich food item or both (Helsing, 1982).

Supplementary foods are always made from locally available products, and they must be socially acceptable and easy to prepare. In both regions, they can consist of the local staple food only, i.e., cereals (non-glutinous or glutinous rice), or bananas. The rice is cooked by boiling, steaming and roasting.

In rural areas of Thailand, most mothers practice supplementation quite early (2-3 days). Infants are given chewed rice, mashed rice or mashed bananas because it is easy to prepare. It may be difficult to persuade mothers to make the extra effort required to prepare the special infant food, because they are already overworked. As female respondents mentioned in Soonthondhada et al. (1987):

> *"When the harvesting season comes, I prepare meals and go to the rice field about 8 or 9 o'clock. I bring my kids with me, and we return in the evening for cooking."*

"We help each other to plant the rice. I help my husband when my kids sleep. My husband and I take turns looking after the kids. When I come back from the paddy field, I tie my kid around my waist with a loincloth. It's a really hard time."

4.3.2 Supplementary Food Types

Supplementary foods are introduced very early to babies in the Northeast region (Kamnuansilpa and Chamratrithirong, 1985). During "Yu Kam" (to be in a state of restriction), mothers will give boiled water or a little bit of chewed glutinous rice to the baby for the first few days before the breast milk begins to flow. When the latter occurs, the colostrum will be squeezed out according to a mother's belief. Thereafter, mothers will give breast milk to a baby together with roasted chewed glutinous rice and water for a few months. The amount of food will be gradually increased as the baby grows older.

Supplementary foods, mainly consisting of non-glutinous or glutinous rice, may involve additional foods such as meat, fish, fruit and vegetables. These are given to an older baby together with chewed glutinous rice. Some Northeast mothers mentioned that the reason for giving glutinous rice at a very early age is because they believed that the baby's bowels become empty as the meconium is removed.

"After delivery, I gave my baby water. After a few nights had passed, I gave him a little bit of roasted and chewed glutinous rice. They said that giving glutinous rice to a baby will help to remove the meconium and it is easy to wash up the baby's sheet.

"After the first few days, the breast milk comes. I squeeze it out because the breast milk is a clear, yellowish milk which is not sweet. When its cloudy and white, I begin breastfeeding my baby".

Types of supplementary foods differ by region. While the above foods are characteristic of Northeast Thailand (especially glutinous rice), mothers in Central Thailand will give warm water or honey to the baby until her breast milk begins to flow. Two main reasons were cited for giving honey to the baby. Firstly, the honey has the ability to expel the meconium. Secondly, if the baby is given honey, when he/she is older he/she will speak politely. After the first few days pass, the baby will be fed soft-cooked rice mashed with banana together with breast milk.

A locally made sweet called "Ta-ko," which is made from rice flour and coconut milk with a little bit of sugar and salt, is also given. This will be fed later on because it is soft and easy to digest.

"The first day after delivery, I gave my baby a little bit of mashed banana."

"I gave my baby both honey and water. When my breast milk came, I breastfed my baby."

"I gave my baby honey for the first few days, because it can be a laxative and also make a baby have a sweet sound." (Central mother)

4.3.3 Beliefs in Supplementary Foods as Related to Food Habits

It is very interesting to consider the use of supplementary foods in relation to food habits. Generally speaking, a vast majority of people in Thailand consume rice as "a main dish." Whenever they consume other foods instead of rice, they still seem to be hungry if they finish a meal without rice (Saihoo, 1984).

The underlying belief in introducing supplementary foods at very early age is to "fill up" the baby and avoid hunger. It also is a means for introducing the

baby to later, more familiar, foods. This behavior is basic to understanding why a baby is fed non-glutinous or glutinous rice at a very early age. Mothers in both regions feel that breast milk alone is not enough for the baby. It only temporarily fills up the baby's stomach as compared to other, more solid foods. The best way to avoid hunger, according to their beliefs is feeding the baby rice as well as breast milk.

> *"I gradually fed my baby with roasted chewed glutinous rice to fill him up when he was a few days old." (Northeast mother)*

> *"Sometimes, I gave my baby mashed banana or mashed rice while breastfeeding because I think that he might get hungry if I give him breast milk alone." (Central mother)*

Mothers in both regions also reported that local health personnel were conducting a campaign to teach them how to produce supplementary food for babies using locally available foods such as soybean, soybean milk, and a mixture of crushed rice, peanut and sesame seed. The ready-made mixture, however, is not given solely to children, rather it is used for everyday family meals. Some mothers also reported that when they returned home from being shown how to prepare the supplementary food, they never cook it because they have no ingredients and/or no time to make it. Hence, for some, the preparation of supplementary foods is a burden since it cannot be incorporated into daily activity patterns.

4.3.4 Attitudes Towards Advertised, Commercially-Prepared Milk Substitutes

Generally speaking, commercially prepared and advertised formulas are unavailable in remote communities, although they are available at the provincial center. Community profile data shows that village stores sell sweetened condensed milk or U.H.T. milk which are inappropriate for feeding a baby. However,

mothers who have trouble with their nipples, or do not have enough milk, view these types of milk as suitable breast milk substitutes.

Mothers in both regions perceive bottle-feeding as expensive and a luxurious practice which can easily cause diarrhea. They feel milk substitutes also should not be given to the baby if a mother is able to breastfeed. Moreover, bottle-fed babies are thought to be more stubborn than breast-fed babies. To illustrate,

> *"I did not bottle-feed my baby because I have heard it can cause diarrhea". (Northeast mother)*

> *"My friend fed her baby with sweetened condensed milk. Her baby gets diarrhea, and she has to take the baby to see the doctor". (Central mother)*

As noted, supplementary foods given to infants are considered appropriate if they are easy to prepare, readily available and perceived to be beneficial to infants. Therefore, local staple foods are widely used both in the Northeast and Central region. Only in a few cases did mothers report that they gave orange juice or porridge during the first 4 to 6 months. Supplementary foods were largely given to infants in order to satisfy their hunger and especially when mothers believed that their breast milk was insufficient for the baby.

4.4 Maternal Food Habits

4.4.1 Food Taboos Related to Child Health

A. Food Taboos, Breast Milk and the Maternal-Child Relationship

Food, breast milk and mother-child relationships are inter-twined, and in many cases they are based on significant beliefs. Mothers in both regions agreed

that all foods taken by mothers become breast milk and pass through the child. Mothers should, therefore, avoid taking "forbidden" foods which can poison the breast milk and cause poor child health (e.g., fever, diarrhea). However, some foods which are forbidden in one region are readily consumed elsewhere depending upon their availability and/or local and regional food habit patterns. Types of foods which are restricted, as observed by mothers, can be divided into 2 groups as follows.

A.1 Pickled Foods

Pickled bamboo shoots, vegetables, and fruits are predominant "taboo foods" among mothers in both regions. When these foods are consumed, they were believed to cause rotten breast milk. If a baby is breastfed with this kind of milk, he/she will become sick.

> *"I do not eat pickled bamboo shoot while I am still lactating because I have heard from my parents that it is a forbidden food for breastfeeding women; it can give the baby a stomach ache or cause fever." (Central mother)*

> *"I ate pickled bamboo shoots while I was breastfeeding and my baby got a diarrhea. I dare not eat it again. Whenever my baby gets sick he is fussy." (Northeast mother)*

A.2 Fruits

In both regions, fruits are restricted during lactation since they are believed to adversely affect the breastmilk and cause stomach aches in the child. Such sour tasting fruits include orange mango, tamarind, pineapple and guava. The others are sweet tasting fruits like watermelon, jackfruit and banana.

B. Food Taboos Related to Maternal Health

B.1 Fish and Meat

Fish are eaten by breastfeeding woman in the Central region, with none of the women mentioning that it was a taboo food. In contrast, breastfeeding woman in the Northeast do not eat certain types of fish (e.g., catfish, carp, snakehead fish, scaleless fish). In addition, white buffalo, duck and birds are also forbidden for lactating women because they may cause headaches or weakness.

B.2 Vegetables

Vegetables are not strict taboo foods for breastfeeding woman in the Central region. Respondents only mentioned cucumber as a cold food which may lead to a reduction in the amount of milk produced. Since breastfeeding women can consume a variety of vegetables during lactation, these can become important components of food habit patterns. In the Northeast region however, taboo vegetables include bamboo shoots, string bean, acacia, margosa, mushrooms, bitter melon and cauliflower. These vegetables are also believed to cause maternal illness, e.g. vaginal irritation, vaginal bleeding, headaches, fever.

> *"I ate all kinds of vegetables that my mother cooked for me while I am breastfeeding, because my parents want to make my baby familiar with those vegetable later." (Central mother)*

> *"I do not eat acacia while I am lactating because I have heard that it may cause fever. I also have heard my neighbor died because of eating acacia after delivery." (Northeast mother)*

As is evident from these cases, some women did report an illness experience related eating specific foods. However, others heard rumors from their

neighbors which altered their food habits during lactation. This was especially the case among Northeast mothers.

4.4.2 Hot and Cold Food Dichotomies

For women in both regions, preparation for breastfeeding begins right after delivery. Consequently, practices believed to stimulate milk flow are absent during pregnancy. After delivery, post-partum women observe a complex set of customary practices governing both the food they eat and the activities they engage in. This set of customary practices is called Yu Kam (in the Northeast) or Yu Fai (in the Central) which means 'to be in a state of restriction'. During this post-partum period, which lasts from 3-15 days, a woman is to observe food regulations as well as to restrict herself in the room by 'lying by the fire'. This aids in regaining strength, physical equilibrium and in producing good quality breast milk.

As for food regulations, post-partum women are not allowed to drink unboiled water. Either regular boiled water or boiled water with an herb in it is encouraged for drinking and for bathing as well. A post- partum woman's diet is also considerably restricted. In the Northeast region, it is merely comprised of roasted glutinous rice, chicken and pork. In the Central region, it is comprised of regular rice, salted fish, coconut milk and "kaeng liang huapli" (a soup made from pear-shaped flower of the banana tree).

Food restrictions are clearly associated with a desire to ensure a steady flow of milk of the right concentration. Boiled or hot water, especially, are believed to stimulate milk flow. Foods permitted during the post-partum period are characteristically white in color, a finding similar to what Mougne (1978) has noted in a Northern Thai village. This color is a symbol of good quality or the correct milk concentration.

Post-partum food restrictions also aim at promoting maternal health. The idea is that, if a woman is healthy and not susceptible to disease, she will most

likely produce high quality milk. The origin of these practices appears to relate to folk beliefs about blood and milk. Women in both regions believe that the constituents of milk are derived from blood flowing through mammary glands. They also know that diet is essential in blood production and quality. Through socialization, they have learned what the can and cannot eat in order to produce and maintain good quality milk. According to these women, the foods they eat can make the blood starchy and cause clotting of the milk ducts. They believe that breast massage, every now and then, would help in breaking down the clots and release the secretion of milk. Almost all women interviewed report that they practice both food observations and breast massage.

In sum, food observations and the practice of 'lying by the fire' reflect the common folk concept of 'hot' and 'cold' relationships. The central idea is of a harmonious balance of body fluids, food intake and physical activities. In this sense, the post-partum women are in a dangerous state of bodily imbalance. The practice of 'lying by the fire', eating so-called 'hot' foods (hot vegetable soup), and avoiding 'cold' food (e.g., cucumber, watermelon) will help women to regain their strength and physical equilibrium.

4.4.3 Prolonged Breastfeeding Leads to Prolonged Maternal Dietary Restrictions

A variety of foods are thus prohibited for breastfeeding women in both regions, and it is important to consider these foods in relation to breastfeeding duration. For the Central region, women of the younger generation, who have delivered at government health facilities, mentioned that health personnel suggested they eat all kinds of foods in order to improve their healthy and increase the quantity and quality of milk. The women complied with this suggestion when they stayed in the medical health center. As soon as they were discharged, though, they practiced food restrictions associated with women in the Central region.

Although they had to skip the "Yu Fai" stage, they will restrict the consumption of some kinds of foods, especially pickled foods and sour tasting fruits which are believed to cause diarrhea and should not be eaten by lactating mothers. Other foods will be allowed 1-3 months after delivery. Discussants noted that, in general, forbidden foods will be allowed after 'lying by the fire' in order to make post-partum women familiar with the foods, since women are viewed as the patients during this stage. After "Yu Fai" they can eat all kinds of food except for those foods which can make the breast milk poisonous. They also explained that

> *"... normally when someone is sick, he gets bored with foods; if she has some foods, these foods will be tasteless or bland for them. After delivery, women have pain and lose their energy; this is also similar to the patients' role"*

In contrast, Northeastern foods of various types are prohibited starting from 'lying by the fire' ("Yu Kam") and extending to 5-12 months after delivery. Before resuming the routine consumption of forbidden foods, breastfeeding mothers eat very limited quantities. If they do not become sick, they can eat more. If they become sick, they must stop eating that food until after weaning. Most breastfeeding mothers do not eat taboo foods until the infants are weaned, because the women are afraid of becoming sick and producing less milk. They also mentioned that if they limit some foods, they will not become sick easily. If they eat various foods, they might get sick more frequently.

Beliefs about maternal sickness, reduced milk production, and other afflictions underlie many food taboos and thus influence breastfeeding duration. In addition, as mothers prolong breastfeeding, they must also prolong maternal dietary restrictions.

4.5 Psychological Factors

4.5.1 Mother and Child Bonding

Regarding the biomedical properties of breast milk, women in both regions also express beliefs concerning social and cultural properties of breast milk. In essence, they believe that breast milk comes from mother's blood, and its influences the mother-child bond.

It has been said that breastfeeding is the first way to tell the truth to a baby and keep a promise. At the breast a child commences to learn how to relate to another person as a warm, loving, caring human being. Breastfed babies receive intimate physical skin-to-skin contact, close holding, and eye-to-eye contact. (Hotehner, 1984)

Mothers in both regions prolong breastfeeding partly because of mother and child bonding. The majority of mothers breastfeed their children for over two years. As mentioned earlier, from women's observations, the quality of breast milk can be observed by color and taste. Mothers are willing to breastfeed their children, even though they have less milk or clear breast milk, in order to increase the affection between mother to a child.

It is felt that this affection started ever since the fetus was fertilized in a womb. The informants believe that the clotted blood in a mother's uterus develops into a fetus, thus making it a part of mother. Moreover, after delivery, an infant consumes breast milk which is believed to come from the mother blood and extracted by the milk gland. Mothers also said that a woman should be condemned if she unreasonably refused breastfeeding. To feed a child with artificial feeding is seen to be modernized and costly. It is also believed to reduce mother and child bonding.

Breastfeeding is of great psychological value to both mother and child. Nothing can initiate such very close contact. Many breastfeeding mothers find that

for all reasons for weaning. Information obtained from mothers in both regions, who have breastfed for at least one year, indicate breastfeeding should be correlated with weaning and a baby's life cycle stages.

According to the women, weaning a baby who is under one year of age is considered to be too early. The baby is weak and requires breast milk to promote his/her growth and development. Mothers who are able to breastfeed their children will continue breastfeeding or as long as possible. Except for pregnancy during the first year of lactation, mothers in both regions said that as soon as they got pregnant they must stop breastfeeding. It is believed that the quality of breast milk is poor when a woman becomes pregnant. Additionally, the unborn child will be weakened if the mother continues to breastfeed. Consequently, supplementary foods will be increasingly introduced instead of breast milk in order to substitute breast milk.

> *"A child 8-10 months of age is too little; he is not strong; he should still be breastfed." (Central mother)*

> *"Weaning a child at 7-8 months of age is too soon. A child will be thin because breast milk is not enough for him; he needs more breast milk than that to make him grow." (Northeast mother)*

Almost all mothers in both regions agreed that weaning at 1-2 years of age is a suitable time for a child because the breast milk becomes clear and less beneficial. They also described that in this period of time a child can drink from a cup, has teeth, and therefore can eat a variety of foods. In addition, by this time the infant teeth are in, and if the mother continues nursing, a child may bite the mother's nipples.

> *"A child at 2 years of age can eat by himself. He can eat more foods if he is weaned. He can eat rice more."*

"A child over 1 year of age is old enough to eat other foods instead of breast milk." (Central mother)

"My baby was weaned at 2 years of age because he can eat by himself, has teeth and can walk."
"A child 2 years of age is strong; he can eat various foods, and should be weaned because he has teeth. Mother's nipples may be bitten by him if he is fussy." (Northeast mother)

The first important reason for prolonged breastfeeding in both regions is mother and child bonding; the mother always sympathizes with a child. She will not stop breastfeeding as long as the child still wants to nurse, even though it is less beneficial. If she still breastfeeds a child, it will refuse to eat other beneficial foods in favor of nursing. Secondly, the last child will be breastfed for a longer period than his older siblings. Yet, women felt that breastfeeding after a child is 2 years of age is inappropriate.

"A child of 3 years is mature enough; he can walk everywhere; he can ask for some foods; he should be weaned."
"If a child is still breastfed when he is over 2 years, he will not eat rice because he used to nursing."
"If a child is breastfed only, he will not be strong and fat. A mother should stop breastfeeding at 2-3 years, then a child will eat rice and will not be thin."
"Breastmilk given for over 2 years is clear and less beneficial, a baby may be thin and weak; a child should be weaned." (Central mother)

"A child over 3 years is old enough. He has teeth. A mother would not like to breastfeed because being afraid of the nipples will be bitten."

"Breastfeeding over 3 years is too long; both mother and child will be in poor health."
"If a mother prolongs breastfeeding for over 2 years, a child will be thin because the mother is not careful about taboo foods, a child always is ill." (Northeast mother)

4.6.2 Weaning Methods

Weaning is difficult for both mother and child because it can directly affect their bonding. The longer the mother breastfeeds, the more difficult it will be to wean the child. Especially, mothers who prolonged breastfeeding said that it was difficult for her and a child to overcome the problem. However, the majority of mothers try to search out weaning methods, usually from their parents or relatives, and then apply these methods to their children. There are several weaning methods available which can be classified as follows:

A. Food Supplementation

Food supplementation is always used to feed a child. Either favorite foods for a child or locally available foods are used for weaning. By giving a child his favorite foods before nursing, a child will be full. It will then gradually reduce nursing and weaning will be easier.

"I was told to give my baby boiled eggs so I could gradually reduce the number of breast-feedings. When he cried I gave him an egg, he had it and felt full, so he did not want to nurse any more". (Central mother)

B. Breast Rejection Methods

The majority of mothers in both regions apply bad tasting substances to the nipple such as bitter herbs or strong spices. They also scare the children with

threats of supernatural powers who would take revenge either on the mother or on the child if it nurses.

> *"I applied mercurochrome on my nipples in order to make my child afraid of the red color; after that he did not suck again."*
> *"I applied a cactus (bitter taste) on my nipples, but my child was very clever, he sucked my nipple and spit it out in order to bet rid of the bitter taste. (Northeast women)*

> *"I applied analgesic balm (hot and spicy) on the nipple; my baby sucked it and he cried. Since then he stopped breastfeeding". (Central mother)*

> *"I applied mandl's paint (black); he was afraid of black color, he did not suck anymore". (Northeast women)*

C. Maternal-child Separation

This weaning method is used as a last resort. As mentioned earlier, almost all mothers who prolonged breastfeeding encountered difficulty in weaning because of their sympathetic feelings. Consequently, a child may simply be separated from his/her mother for a period of time, especially at night. This usually entails the mother staying at a relative or friend's house. While the mother is absent, a child may cry first, but later, he/she will become accustomed to the separation and gradually stop breastfeeding.

> *"I myself had to stay at my relative's house for a few nights, my baby had to be weaned otherwise it would be fussy." (Central mother)*

> *"Once, I had an experience. My last child did not want to be weaned but I had a good opportunity to wean him without any*

problem. Fortunately, I participated in a celebration of a new house. I stayed at my friend's house and since then my baby was weaned." (Northeast mother)

4.7 Breastfeeding as a Contraceptive Method

4.7.1 Attitudes Towards Breastfeeding as a Contraceptive Method

Breastfeeding is a natural method of child spacing, and it is "dose dependent" (i.e., related to the frequency of nursing). Breastfeeding's main limitation as a family planning method is that there is no way of predicting when the associated inhibition of ovulation is going to end. When menstruation returns, it indicates that the potential for fertility has returned, and in a society not using contraceptives 3-9% of women pass from a phase of lactational amenorrhoea directly into the next pregnancy without an intervening episode of menstruation. The longer the duration of lactation, the greater the chance of a pregnancy occurring. Therefore the lactating woman needs contraceptive advice (Kleinman and Senanayake, 1984).

This study asked mothers in both regions whether or not they considered breastfeeding as a contraceptive method. The women do know about it from their parents, but they do not believe and practice breastfeeding as a contraceptive method. They said that they had seen breastfeeding mothers become pregnant. Breastfeeding was thus viewed as an ineffective method for family planning according to mothers' responses. Most of them did not use breastfeeding as a contraceptive method when modern methods were available.

"I had heard that if a child was weaned too early, mothers could get pregnant early". (Northeast mother)

It is believed, however, that both breast milk and fetus are blood. If mothers still breastfeed, the blood is not clotted; if they do not breastfeed, the clotted blood becomes the fetus. Therefore, to prolong breastfeeding can delay subsequent pregnancy.

4.7.2 The Effect of Contraceptive Methods on Milk Flow and Breast Milk Quality

Mothers in both regions knew of no lactating women who used hormonal contraceptive methods, either oral or injectable. These are seen to adversely effect milk flow and the quality of breast milk. For mothers taking these contraceptives, the mammary gland will produce less breast milk, with the latter also being clear and tasteless. Almost all breastfeeding mothers therefore try to avoid using those contraceptive methods.

4.7.3 Using an Intra-Uterine Device (IUD) for Birth Spacing

Unlike other methods of contraception, hormonal contraceptives can affect many bodily systems and influence breastfeeding in special ways. In particular, they have the potential to change the quality as well as the quantity of milk produced. (Kleinman and Senanayake, 1984). Discussions with mothers in both regions also noted adverse effects of hormonal contraceptive among lactating women. Therefore, in case of birth spacing, they prefer to use an IUD during lactation. Health workers also recommended them to avoid using hormonal contraceptives because mothers always complained about the side effects on the quantity and quality of breast milk.

Chapter 5
CONCLUSIONS AND RECOMMENDATIONS

The quality of breast milk is considered to be the first important priority affecting the breastfeeding duration. Maternal beliefs concerning the quality of breast milk are no different between the Northeast and Central regions. Beliefs in good quality or bad quality breast milk appears to determine the duration of breastfeeding. High quality breast milk makes a child healthy and developed faster. Mothers will continue breastfeeding as long as the breast milk is perceived to be nutritious.

Secondly, supplementary food is simultaneously given to a breastfeeding child at a very early age (usually beginning a few days after delivery), which is in consensus with survey results. Northeast mothers give roasted chewed glutinous rice as supplementary food, while central mothers utilize mashed rice in order to remove the meconium as well as to fill up a child. In addition, breast milk substitutes such as sweetened condensed milk and U.H.T. (ultra-high temperature) milk are now favored among breastfeeding mothers who have trouble with their nipples or perceive themselves as producing an inadequate milk supply.

Thirdly, maternal food habits are important in defining breastfeeding duration. Food restrictions after delivery are widely practiced among mothers in the Northeast region, and they assist in both decreasing and increasing the breastfeeding duration. Moreover, the duration of food restrictions are not precise and depend heavily upon mothers' beliefs regarding each taboo food.

Central region mothers are not as restricted by food taboos as their Northeastern counterparts, except in the case of pickled foods and some kinds of sour tasting fruits. Almost all mothers try to make their infants familiar with all kinds of foods which they are later expected to eat as children and adults.

Fourthly, psychological factors associated with breastfeeding duration include mother and child bonding on one hand, and psychological characteristics and adversities of breast milk which may affect mother and child on the other. In essence, as long as the mothers breastfeed, they must be very careful of their breast milk otherwise it may harm mother and child. Mothers in both regions resemble each other in these practical beliefs.

Fifthly, almost all mothers in both regions pay attention to a baby's life cycle; they observe the child's growth and development as correlated with the quality of breast milk during breastfeeding. From their observations, mothers can determine breastfeeding duration for each child.

Prolonged breastfeeding mothers often have trouble with weaning. They try to find the best method which does not adversely affect either mother or child. Lastly, breastfeeding is well-known among women in both regions as a contraceptive method, however, they do not trust it. Lactating women also try to avoid using hormonal contraceptives, in favor of an intra-uterine device.

Recommendations

Based on the study, government and/or non-government organizations in the field of maternal and child health should realize the following:

1. The cultural beliefs of breastfeeding mothers should be considered in terms of their positive or negative influences on breastfeeding. Oftentimes, health officers themselves sometimes believe that all traditional beliefs are bad and must be changed; but this is not necessarily right. Health officers should find out whether the belief is harmful, healthy or neutral. When one understands how the beliefs affects a person's health, then one can concentrate on trying to change only the beliefs which are harmful to mother and child health. Any designated program concerning breastfeeding should be reviewed in this light.

2. Any programs concerning maternal and child health should not only be focused on mothers, but also on other groups such as parents, relatives, neighbors, traditional birth attendants, etc., which can support a mother's decision to prolong breastfeeding. They should also make special note of the main child caretakers (which may not be the child's actual mother) in targeting health education interventions.

3. The implementation of the maternal and child health programs should not be a burden to mothers. Rural mothers are very much concerned with their workload (e.g., agricultural, home) as well as caring for their babies. Interventions, such as supplementary food preparation, should be based on the practicalities of everyday life. They should also take note of the number of individual steps each new behavior actually entails, rather than viewing the procedure as a single large entity. Necessary resources should also be evaluated in order to make the intervention "cost- effective" for families.

4. Health education activities, including breastfeeding promotion, must fit with the workings of health centers. For example, during ante- natal check-ups at the hospital or health station, the dissemination of correct information about colostrum should be addressed.

5. For the need of contraception during breastfeeding, health personnel should recommend that breastfeeding mothers use barrier methods (e.g., IUDs) instead of taking hormonal contraceptives.

Annex
OPERATIONAL DEFINITIONS

Belief

Beliefs are integrated parts of cultural systems. They comprise propositions (e.g., thoughts, ideas, knowledge, convictions, concepts) which are felt by individuals and/or groups to be either true or false. A particular belief may be based on sound factual evidence, individual/group institutions, experiences or perceptions. Beliefs are transmitted inter- generationally through the process of child socialization.

Breastfeeding Duration

The duration of breastfeeding is the number of months a woman nurses her baby continuously after delivery.

Focus Group Discussion (FGD)

The FGD is a technique, now widely used in the social sciences, to understand the processes taking place in people minds that can effectively explain observed changes (Knodel and Pramualratana, 1987; Morgan, 1988). In recent years, FGDs have been refined into a systematic method for obtaining information on psycho-social and behavioral factors. A FGD can be simply defined as a discussion in which a small number of discussants, under the guidance of a moderator, talk about topic that is believed to be important to the investigation. Discussants are selected from a specific target group whose opinions and ideas are relevant to the investigation. More than one session in each project is usually conducted to ensure adequate coverage.

The discussion is based on information which can be obtained in the group's atmosphere. There are usually a number of selected topics which are listed

in a discussion guideline to be addressed in the session. The style of the sessions is an open conversation in which each discussant may comment and ask questions of others, including the moderator. Interaction among the discussants is encouraged to stimulate in-depth discussion of various topics relevant to those under research.

The moderator is responsible for introducing and directing the discussion, encouraging participation, and guiding the discussion in an unbiased manner. Before finishing, the moderator needs to ensure that all topics of interest in the guideline are discussed by the group (Folch-Lyon and Trost, 1981).

In-depth Interviewing

The most important aspect of in-depth interviewing is to allow an opportunity for two-way communication between the researcher and the informant. The latter can be either general people or key persons depending on the specific interests and issues of the study. The intention of in-depth interviewing is also to allow each person to say what he or she feels, believes and expects without being influenced by other persons. The researcher should expect variations in the informant's thoughts (Svetsreni, 1989).

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