Knowledge, Attitudes, and Practices of Breastfeeding Women in Krong, Kep Municipality, Cambodia

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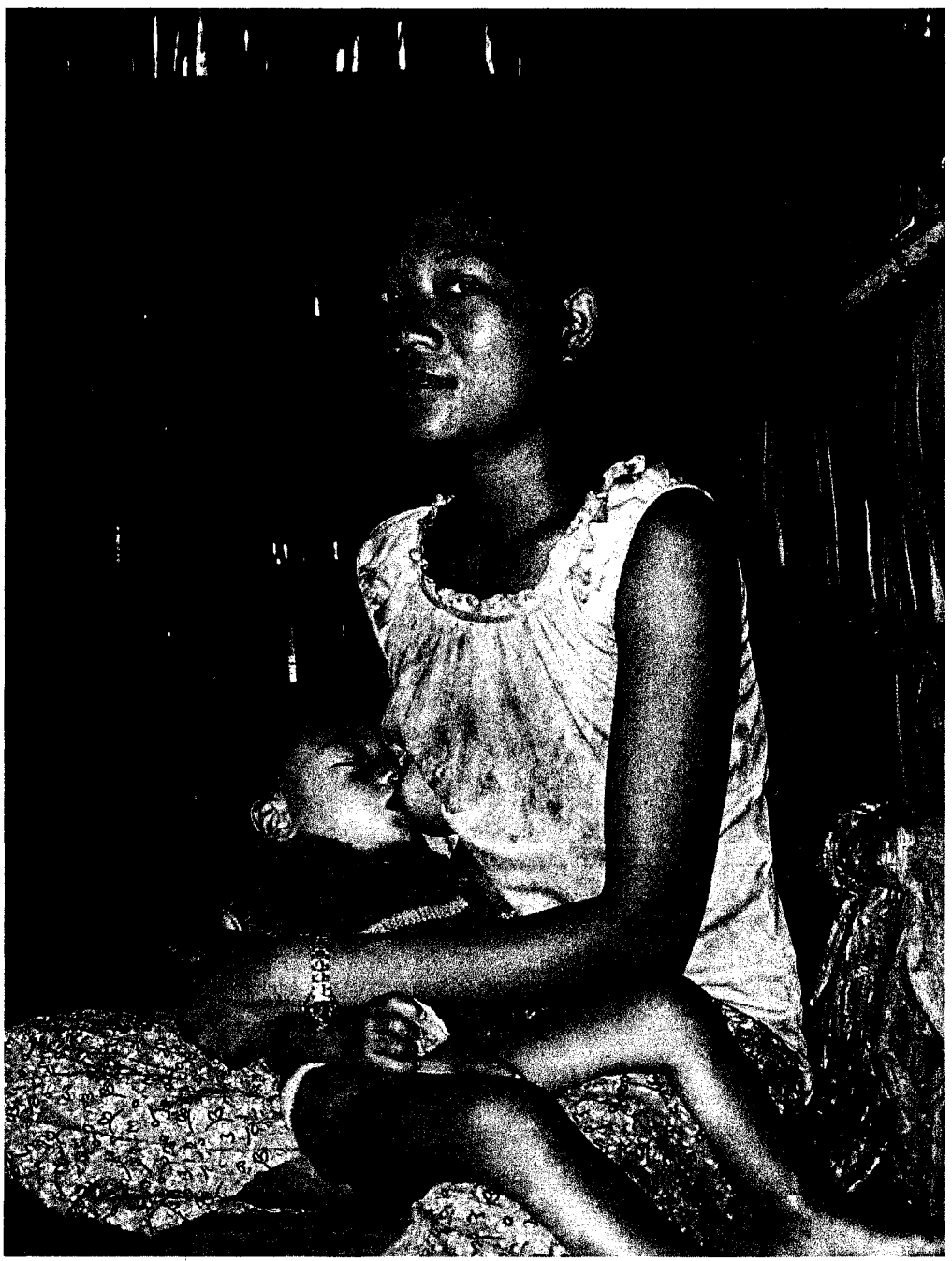

Abstract

South-Eastern Asia has the highest levels of undernourishment among children in Asia. Cambodia remains one of the least developed and poorest countries in this region; the probability of a child dying before age five is roughly 1 in 10. Given this information, there is an international expectation that Khmer mothers of newborns initiate and maintain exclusive breastfeeding for the recommended six months. There is also a concomitant expectation that Cambodian society will provide these mothers with essential health services, education, and support systems in order to ensure that breastfeeding is a success. The purpose of this study was to:

1. Determine mothers' knowledge related to infant feeding.
2. Determine attitudes that affect mothers' decisions to initiate breastfeeding and to continue exclusive breastfeeding for the recommended six months minimum.
3. Determine current breastfeeding practices and to identify cultural barriers to breastfeeding.
4. Determine if there are existing breastfeeding promotion programs and what, if any, changes could be made to these health promotion programs to reduce the suggested barriers to breastfeeding.

Descriptive statistics were used to organize and summarize the information obtained from a sample (n = 141) of the population. Analysis was used first to determine whether or not a mother chose to breastfeed, and second to determine for how long a mother breastfed exclusively. Reasons why mothers chose to breastfeed or chose not to breastfeed/to discontinue breastfeeding were also analyzed. The results from the KAP study suggest most Khmer mothers have a high level of confidence regarding their

breastfeeding skills. Most women are not shy to breastfeed in public and feel a strong sense of belonging to their communities. Similarly, Khmer mothers are more likely to breastfeed if they are older, well-educated, and feel supported.

Likewise, a mother's decision not to breastfeed/to discontinue breastfeeding is largely influenced by the social inequalities in her environment. The decision not to breastfeed cannot be attributed solely to any one factor yet each contributing factor is greatly compounded by the injustice of poverty. The conditions in which Cambodian mothers must make decisions for their health and the health or their children are appalling. Moreover, professional breastfeeding support programs do not exist in Krong Kep, Cambodia. Unlike in Canada where almost all women have access to many health promotion programs (Healthy Babies, Healthy Children, La Leche League, prenatal classes, etc.) mothers in Cambodia do not have this luxury. It is extremely hard for Cambodian mothers to overcome the barriers to breastfeeding without the correct support and without access to culturally sensitive public health breastfeeding programs.

Lastly, breastfeeding in Cambodia is a cultural experience between mother and child. Khmer women are experts in their own culture and health promotion programs must take a humble approach to traditional practices such as roasting and the use of traditional medicines following childbirth. Khmer mothers must not be induced to breastfeed through guilt and thus international recommendations regarding breastfeeding initiation and duration should be examined in a Cambodian context. Further research and respectful cross-cultural dialogue is needed in order to enable Khmer mothers to increase control over health based decisions in their lives and to and improve maternal and child health in Cambodia.

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Abbreviations and Acronyms

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
BFHI	Baby Friendly Hospital Initiative
CCLS	Cambodia Child Labor Survey (2001)
CDC	Council for the Development of Cambodia
CDHS	Cambodia Demographic and Health Survey
CIH	Centre for International Health
CIPS	Cambodia Inter-Censal Population Survey
CMDG	Cambodia Millennium Development Goals
DFID	Department for International Development
DHS	Demographic and Health Survey (or CDHS)
ECCC	Extraordinary Chambers in the Courts of Cambodia
GDP	Gross Domestic Product
HBHC	Health Babies, Healthy Children
HIV	Human Immunodeficiency Virus
HSP	Health Strategic Plan 2008
HSSP2	Health Sector Support Program
IDA	International Development Association
IDRC	International Development Research Centre
IMR	Infant Mortality Rate
IOM	International Organization for Migration

IUD	Intrauterine Device
KR	Khmer Rouge
MSF	Médecins Sans Frontières
MCH	Mother and Child Health
MDG	Millennium Development Goals
MDGC	Millennium Development Goals Cambodia
MEDiCAM	Membership Organization for NGOs active in Cambodia's health sector
MMR	Maternal Mortality Rate
MOH	Ministry of Health
MOPS	Moving Out of Poverty Study
MOWA	Ministry of Women's Affairs
NBC	National Bank of Cambodia
NECHR	National Ethic Committee for Health Research
NGO	Non- Governmental Organization
NHS	National Health Survey
NIS	National Institute of Statistics
NMCHC	National Maternal and Child Health Centre
OD	Operational District
PHD	Provincial Health Department
PMTCT	Prevention of Mother-to-Child Transmission
PRK	People's Republic of Kampuchea (1979-1989)
RACHA	Reproductive and Child Health Alliance

RGC	Royal Government of Cambodia
RH	Reproductive Health
STI	Sexually Transmitted Infection
TBA	Traditional Birth Attendant
THP	Trained Health Provider
U5MR	Under-five Mortality Rate
UNAIDS	United Nations Joint Programme on HIV/AIDS
UNAKRT	United Nations Assistance to the Khmer Rouge Trials
UNICEF	United Nations Children's Emergency Fund
UNFPA	United Nations Population Fund
WHO	World Health Organization

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1.0 Introduction

1.1 Introduction

According to the World Health Organization (WHO), breastfeeding (through direct feeding or feeding via expressed milk) is the optimum method by which to provide a child with the necessary nutrients and antibodies for healthy growth and development. The National Maternal and Child Health Centre (NMCHC) in Cambodia recognizes that early initiation and exclusive breastfeeding will provide Cambodian children with the full nutritional requirements needed to obtain the most favourable standards of health.

The United Nations International Children's Emergency Fund (UNICEF), in accordance with WHO, recommend that breastfeeding is initiated within the first hour of life and continued exclusively for six months. Further, it is suggested that breastfeeding be sustained for at least two years with complimentary foods being introduced only after the age of six months (WHO/UNICEF, 1981).

The benefits of breastfeeding to both mother and child have been well documented (Shields, 2005). Yet around the world many children are not receiving exclusive breastmilk for the first six months of life. Many factors influence a mother's decision to breastfeed including the health of the child, cultural practices and access to breastfeeding support programs. In Cambodia, breastfeeding initiation rates are highest among educated women who were assisted at delivery by a health professional, although highly educated mothers breastfeed their children for a shorter duration than mothers with little or no education. Cambodian mothers from the highest wealth quintile breastfeed for the shortest duration (DHS, 2005).

A plethora of literature indicates that it is possible to increase breastfeeding initiation and duration rates with proper support from family, communities, health care professionals, governments and policy makers (Shields, 2005).This support can be achieved by providing mothers with culturally appropriate information, access to lactation professionals, and affordable health promotion programs. From a public health perspective it is necessary to determine potential barriers to the practice of breastfeeding. Questions to be explored, examined, and evaluated in this study include:

1.2 Evaluation Statements

1. Determine mothers' knowledge related to infant feeding.
2. Determine attitudes that affect mothers' decisions to initiate breastfeeding and to continue exclusive breastfeeding for the recommended six months minimum.
3. Determine current breastfeeding practices and identify cultural barriers to breastfeeding.
4. Determine if there are existing breastfeeding promotion programs and what, if any, changes could be made to these health promotion programs to reduce barriers to breastfeeding.

1.3 Rationale

The benefits of initiating breastfeeding in the first hour of life and exclusive breastfeeding for six months (minimum) are well documented. However, it is also evident from the literature available on breastfeeding that cultural barriers that affect a woman's decision to breastfeed exist in many countries. In Cambodia, little has been documented on infant feeding practices and few studies have been completed with respect to noted culture-specific barriers to breastfeeding. In order to best understand the barriers a

Cambodian mother may have to endure and overcome in order to breastfeed successfully, it is imperative to ask mothers themselves culturally appropriate questions within a safe environment. Knowledge of specific beliefs and practices is vital to the effectiveness of interventions. This study will assess the knowledge, attitudes, and practices of breastfeeding women in Krong Kep, Cambodia and will contribute to the baseline data needed to implement maternal and child health services in Kep. Research was conducted in Cambodia in partnership between Lakehead University and in accordance with policy guidelines of the Centre for International Health (CIH) at The University of Toronto. Ethical approval was given by Lakehead University, CIH, and the Cambodian Ministry of Health (MOH).

1.4 Centre for International Health

The Centre for International Health (CIH) at the University of Toronto was created to "achieve excellence in research and teaching by enabling existing international health endeavours to reach new heights; to promote, develop, facilitate and execute new research, educational programs and to extend the range of innovative professional development opportunities and activities that are available to both faculty and students" (CIH, 2006). In 2002, working in conjunction with the Cambodian Ministry of Health (MOH), the CIH established the Kep, Cambodia field station for primary health care development. The goal of the CIH is to work within the framework of the MOH to assist current policies and practices and to strengthen primary care service and delivery in Kep. Maternal and child health is an integral component of primary health care, and to this end, a study of breastfeeding knowledge, attitudes, and practice (KAP) among rural women in Cambodia was conducted in partnership with the CIH.

1.5 Glossary of Important Terminology

A glossary of important terminology has been included to facilitate learning and should be referred to as needed. Definitions of words and other relevant information is intended to assist those less familiar with maternal and child health, specifically vocabulary pertaining to breastfeeding practices in Cambodia.

Anaemia

Anaemia is characterized by a low level of haemoglobin in the blood, resulting in a reduced oxygen-carrying capacity of red blood cells. About half of all cases of anaemia can be attributed to iron deficiency. The prevalence of anaemia in developing countries is extremely high, especially among pregnant women and vulnerable children. For women, breastfeeding decreases the likelihood of experiencing postpartum anaemia. For breastfed infants, haemoglobin levels are generally high. Most often these infants are not associated with iron deficiency before 9 months of age (Godel, 2000; Villamor et al., 2000; WHO, 2008).

Antenatal Care (ANC)

Antenatal care comprises all the health care that a mother receives during pregnancy and at the time of delivery. It is described according to the type of provider, number of ANC visits, stage of pregnancy at the time of the first and last visits, and services and information provided during those visits. (DHS, 2005).

Baby-Friendly Hospital Initiative (BFHI)

The BFHI, launched in 1991 by both the World Health Organization and the United Nations Children's Emergency Fund, is a global strategy to ensure that all hospitals and birth-centers become facilities of breastfeeding support. A maternity facility

can be designated "Baby Friendly" when it has implemented the Ten Steps to Successful Breastfeeding (WHO, 2004).

Barrier

Any factor, belief, or circumstance that makes it difficult to reach the desired goal (i.e. exclusive breastfeeding for first six months of newborn's life) is a barrier to the achievement of that goal (Head, Brownell, Hutton, Hartman, & Dabrow, 2002).

Body Mass Index (BMI)

The BMI is a ration of weight-to-height. It can be calculated using the formula BMI = (height in metres)^2. Women with a BMI of less than 18.5 kilograms are considered underweight. The body mass index scale is not intended for use with pregnant and lactating women (Health Canada, 2005).

Breastfeeding

The child has received breast milk direct from the breast, or expressed (Labbok, 2001).

Breastfeeding Duration Rates

Breastfeeding duration rates refer to the proportion of women who chose to breastfeed their child for any given duration. Duration of breastfeeding may be in combination with formula feeding (Dennis, 2002).

Note: For the purpose of this study, the duration rates given will be for exclusive breastfeeding only (no use of formula) for a time period of six months.

Breastfeeding Initiation Rate

Breastfeeding initiation rates refer to the proportion of women who chose to breastfeed their child, regardless of duration, and may be in combination with formula feeding (Dennis, 2002).

Colostrum

The first milk produced by the breast for the first three to four days after delivery. It is a rich yellowish fluid, containing, water, sugar, protein, and vitamins. It provides a baby with the first immunization against infection and offers some protection against allergies (Health Canada, 1990)

Expressed Milk

Breast milk is drawn from the breast by hand or pump and then fed to the infant by cup or bottle (Brown et al., 2001).

Formula Feeding

The child receives some liquid or semi-solid food that is not breast milk (Labbok, 1990; Labbok, 2000).

Lactation

Lactation is the secretion and ejection of milk by the mammary glands (Tortora & Grabowski, 2000).

La Leche League International (LLLI)

Founded in 1956 by seven nursing mothers, the sole purpose of LLLI is to help mothers worldwide to breastfeed through mother-to-mother support, encouragement, information and education. Women can become members of La Leche League and gain

access to a plethora of information on breastfeeding and topics related to parenting (La Leche League, 2003).

Postpartum Amenorrhea

Postpartum amenorrhea is the suppression or absence of menstruation following childbirth. Both duration and frequency of breastfeeding can affect the length of postpartum amenorrhea (DHS, 2005).

Roasting

According to traditional practice, following childbirth, a Khmer woman will roast or lie for periods of time atop a slatted bamboo bed over a wood or charcoal fire to restore heat. Women roast to restore their sawsaye (body ligaments and fibers), to avoid internal coldness and to prevent blood from clotting inside their uterus. As well, they roast to ensure good skin in old age, prevent joint aches, and to improve overall energy and well-being (White, 2004).

Traditional Birth Attendant (TBA)

In many developing countries, home birth remains a strong preference and/or is the only option. In Cambodia, the majority of births (89%) occur at home where deliveries are most likely to be assisted by a TBA. Traditional birth attendants speak the local language, allow traditional birthing practices, and often have the trust and respect of the community. TBAs may or may not be trained in basic hygiene and midwifery skills (DHS, 2005; Walraven and Weeks, 1999).

Vitamin D

Vitamin D is a fat soluble vitamin that is made in the skin and may be obtained from diet, although it is found in only a few food sources including egg yolk, liver, and fatty fish. Consequently Vitamin D status is most often a function of sun exposure.

It is widely accepted that human milk contains very low levels of Vitamin D. Vitamin D concentrations in human milk depend on maternal Vitamin D status. According to the WHO, breastfed infants in regions where sunlight is plentiful do not require supplemental Vitamin D (WHO, 2002). Cambodia is such a region.

Wet Nurse

A wet nurse is a woman who breastfeeds an infant other than her own (Pilkenton, 2002). The practice of using a wet nurse draws together historical, cultural, social, political and economic threads. A traditional reason for the use of wet nurses in all cultures was maternal mortality during childbirth. In the developed world the use of a wet nurse is no longer necessary and is not a common practice. In developing countries, the use of a wet nurse is still a common practice, although it poses a risk for the transmission of HIV through breastmilk. Further, due to the widespread availability of infant formula, the practice of using a wet nurse has decreased (La Leche League, 2003; Minami, 2007)

1.6 Literature Review

A plethora of resources exist that support and promote exclusive breastfeeding for the recommended six months minimum (WHO/UNICEF, 1981). An attempt was made to review culturally sensitive documents relative to the practice of breastfeeding despite the lack of literature pertaining to such practices in Cambodia. Thus, most information reviewed regarding maternal and child health practices in Cambodia was taken from the

Cambodia Demographic and Health Survey 2005. Main findings from the report suggest that programs of reproductive and child health in Cambodia need to be expanded and improved. The literature review provided by this study intends to assist future students, program managers and policy makers in evaluation of the current health status of women and in the formulation of appropriate breastfeeding promotion programs in Cambodia. The literature review with be divided into two sections literature on Cambodia and literature on maternal and child health in Cambodia with a focus on breastfeeding.

2.0 Review of Literature: Cambodia

2.1 Introduction

This chapter presents literature findings on important aspects of Cambodia. The purpose of the country overview is to situate the context of this study and to shed light on why many of the barriers that women must overcome in order to breastfeed are culture-specific to Cambodia and its history. In combination with other literature, this information is useful in formulating programs and polices intended to improve public health promotion services in Cambodia.

2.1.1 Geodemography

The country of Cambodia is located in Southeast Asia and is bordered by Vietnam to the east, Thailand to the west, and Laos to the north. Figure 2-1 shows a geographical map of the area. For the purpose of this study, most information will pertain to the province of Krong Kep.

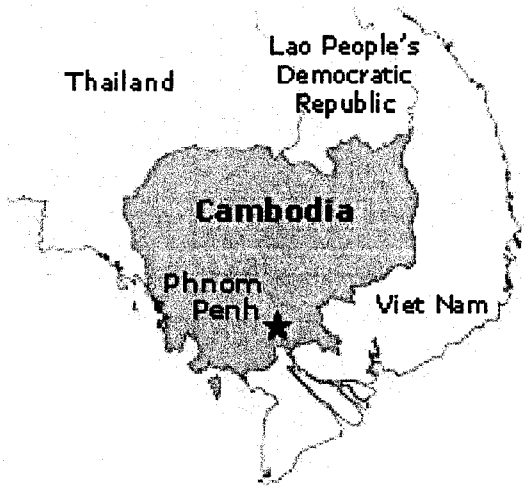

Figure 2-1 Cambodia

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The province of Kep is located in the southeastern region of Cambodia, 172 kilometers south of Phnom Penh. It is approximately 200 meters northwest off the coastline of the Gulf of Thailand (see Figure 2-2). The 2003 population was estimated at 35, 434 (MOH, 2004).

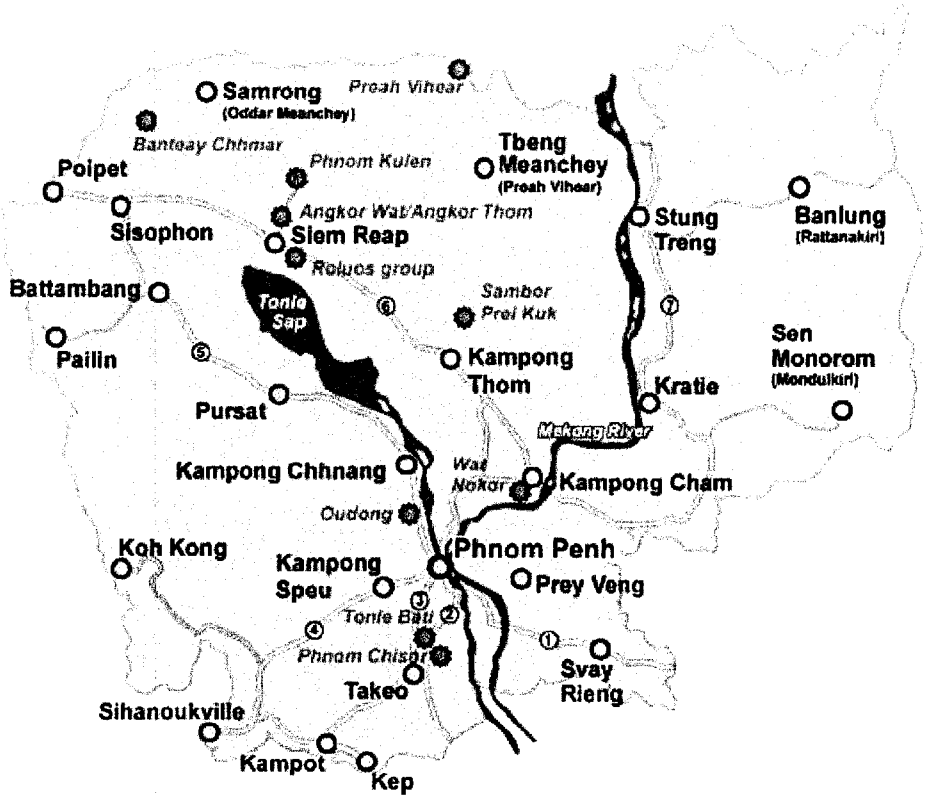

Figure 2-2 Kep, Cambodia

Kep is divided into 5 communes and 16 villages (Appendix A). The operational districts office (located in Kep) and the MOH (located in Phnom Penh) direct the health policies and services available to the local population. There is one referral hospital and three health centres (Okrasa, Pong Tuk, and Angkoul) in the province (Kalaichandran & Zakus, 2005).

2.1.3 Research Site

The Centre for International Health (CIH) office is located in Kep Ville, a small village located within the province of Krong Kep, Cambodia. The CIH office is located at the Seaside Guesthouse. Researchers in partnership with the CIH are encouraged to stay at the guesthouse where the office is located. Accommodation is approximately 7

USD/night. Rooms include a bed, fan, side table and private bathroom (with cold-water showers). For an extra charge, laundry services are available at Seaside Guesthouse.

The Seaside Guesthouse has a kitchen/restaurant where one can find very simple rice, noodle, and seafood dishes for approximately 4 USD. Most guesthouses in Kep also have their own restaurants with a variety of foods. A short walk from the guesthouse, one will find the "Crab Shacks", a line of restaurants along the water selling mostly fresh seafood (see Figure 2-3). Freshwater fish forms a huge part of the Cambodian diet and many Cambodian households are dependant on fishing for their livelihood. There are no grocery stores in Kep. Consequently, the diversity of foods eaten by mothers and children in Kep is limited. The main source for food is farming. Agriculture in Kep largely focuses on rice cultivation. Other foods that are regularly farmed include wild vegetables, poultry, and shrimp farming.

Figure 2-3 Crab Shacks in Kep, Cambodia

2.1.4 Climate

Cambodia has a tropical rainy climate with two distinct seasons. From May to November, Cambodia experiences a monsoon season with strong winds and heavy rains. From December to April, the country undergoes a dry season with high humidity and intense heat. The mean annual temperature for Phnom Penh is 27 degrees Celsius. Overall, climate sets the rhythm for people living in rural Cambodia (World Factbook Cambodia, 2008). Many Cambodian women find it especially challenging to sustain exclusive breastfeeding during the rainy season, especially poor mothers. This is the season when rice cultivation demands the most attention, and poor mothers must support their families by working in the rice fields (WHO, 2008).

2.1.5 Demographic

Cambodia has an estimated population of 13, 881, 427 people as of July 2006 (CIA, 2006). Annual population growth rate is 1.8%. The majority of the population lives in a rural environment (85%) in comparison to an urban setting (15%). Life expectancies at birth for males and females are 58 and 64 respectively (DHS, 2005). In Cambodia, the Infant Mortality Rate (IMR) is 66 per 1,000 live births and the Under 5 Mortality Rate (U5MR) is 83 per 1,000 live births (MOH, 2008). To distinguish the severity of these numbers, life expectancies at birth for males and females in Canada are 79 and 84 respectively. In Canada, IMR is 5 per 1, 000 live births and U5MR is 6 per 1,000 live births (World Factbook Canada, 2008).

2.1.6 Education

The adult literacy rate for age 15 and over (total) in Cambodia is 74%. Literacy rates for males and females are 85% and 64% respectively. Women have noticeably less

education than men with an average of 2.8 years of schooling completed verses male rates of 4.8 years (CSES, 2004). This reflects one of the most pronounced gender disparities in Cambodia. Urban literacy rates (both sexes) are higher (84%) than within rural environments (72%) (NIS, 2004). A solid foundation of basic education and literacy expands an individual's economic opportunities and can also be a powerful tool for increasing awareness of health promotion and the uptake of preventative health practices such as breastfeeding (World Bank, 2006).

2.1.7 Language

The native language of Cambodia is Khmer, which is spoken by 95% of the population (CIA, 2006). Minority languages spoken in Cambodia include Chinese and Vietnamese. Political groups and nongovernmental organizations (NGOs) have introduced language demands for participating Cambodians. International assistance from agencies such as the World Bank and Médecins Sans Frontières (France) influence the context in which Cambodians make language choices. Very few international workers know Khmer, and employees and recipients of aid are thus required to know their organization's preferred language, largely French and English (Clayton et al., 2007). Language demands form barriers for vulnerable populations who are unable to be educated in a second language, particularly women and children. Accordingly, public health programs and policies that target women and children, such as breastfeeding promotion, must be tailored to meet the language needs of individual communities.

2.1.8 History[1]

In 1863, King Norodom of Cambodia signed an agreement with the French to establish a protectorate over his kingdom. Following the accord, the country of Cambodia gradually came under French colonial domination. During World War Two, the Japanese attempted to negotiate acceptable terms for Cambodia to gain independence from the French. However, following the war the French remained in power, convinced that they had a "civilizing mission". Rather than merely governing the Cambodian people, the French attempted to Westernize them in accordance with assimilation ideology. French culture was enforced including the use of the French language, wearing Western clothes, and conversion to Christianity. Eventually this led to a royal crusade for sovereignty and on November 9, 1953, Cambodia gained complete independence from France under the leadership of Prince Sihanouk (Nations Encyclopedia, 1987).

Throughout the 1960s, domestic politics became polarized in Cambodia. Opposition to the government increased within the middle class while leftist groups and individuals, including Paris-educated leader Saloth Sar (later known as Pol Pot), led a rebel group under the Communist Party of Kampuchea (CPK). Sihanouk called these rebels the Khmer Rouge. However, the 1966 elections showed a significant swing to the right and, in 1969 General Lon Nol formed a new government and overthrew Prince Sihanouk in 1970. It was during this period that the communist Khmer Rouge insurgency, aided by supplies and support from North Vietnam, continued to grow inside Cambodia. At the same time "Operation Menu" a series of secret B-52 bombing raids by

[1] History of Cambodia was written in reference to a plethora of overlapping academic online references including but not limited to: Cambodian DHS 2005, The World Factbook, Nations Encyclopedia, Royal Government of Cambodia, Yale University Cambodian Genocide Program, Cambodia Tribunal Monitor, and UNAKRT

the United States was occurring in Cambodia. During the Vietnam War, US forces invaded Cambodia in a further effort to disrupt the Viet Cong or the National Liberation Front. However, in practice much of the bombing campaign was indiscriminate and many civilians were killed as a result. Overall, the campaign failed in its objective of preventing North Vietnamese offenses and enraged the Cambodian public. Many scholars suggest it created a climate that allowed the Khmer Rouge to come to power (Model, 2005; Owen and Kiernan, 2006).

On April 17, 1975, the Khmer Rouge expelled the Lon Nol regime and took control of the country, becoming stronger and more independent from the Vietnamese. Immediately after this takeover, the Khmer Rouge ordered the evacuation of all cities and towns, sending the entire urban population into the countryside. The ultimate goal was to make Cambodia economically self-sufficient by maximizing agricultural production. The Khmer Rouge tried to accomplish this by evacuating urban areas and converting populations into agricultural labourers organized into communes made up of work units. Overall, the Khmer Rouge attempted to redesign society into a model conceived by Pol Pot which was driven by, among many things, a desire to reclaim the Mekong delta, lost to Vietnam since the 17th century (UNAKRT, 2008; Kiernan, 1996; Yale University, 2008)

During this period, religion, particularly Theravada Buddhism, was ruthlessly suppressed. Many temples were destroyed, monks were killed, and ritual activity was forbidden. Likewise, the Cambodian currency and banking system were abolished. The Khmer Rouge also sought to eliminate the educated class, leaving Cambodia with a severe shortage of skilled health professionals. People were brutally executed throughout

the country for wearing glasses, speaking a foreign language, singing, and crying for dead loved ones. Hunger and malnutrition were constant during this period and thousands of people died from starvation. Overall, the reign of Khmer Rouge terror was widespread and eventually they directed their destruction not only against ordinary people but against their own cadre and former allies, the Vietnamese communists. This new direction was taken by the Khmer Rouge to demonstrate their fierce "Pro-Cambodia" position.

Motivated by border clashes and ideological communist differences, in December of 1978, North Vietnam formed the Kampuchean United Front for National Salvation (KUFNS) and launched an invasion of Cambodia. The KUFNS was composed of North Vietnamese and Khmer communists who had fled to Vietnam from Cambodia. On January 7, 1979 the KUFNA took over Phnom Penh and defeated the Khmer Rouge, sending the regime westward towards Thailand.

Violent warfare between the Vietnamese and retreating Khmer Rouge holdouts continued throughout the 1980s. During this period, there were also massive movements of Khmer within the country of Cambodia as they sought to find lost relatives, return to their villages for safe shelter, or as they fled to neighbouring countries in search of food and security. Recovery during this time was therefore very slow and revival efforts were severely hampered by the ongoing civil war and mass migration of the Khmer. As well, an international blockade of Cambodia prevented its participation in significant loan and assistance programs and thus directly impeded serious development efforts.

In October 1991, the country of Cambodia experienced some relief when the United Nations took full authority to supervise a cease-fire and prepare the country for free and fair elections. The UN Transitional Authority in Cambodia (UNTAC) supervised

the first free elections, held in May 1993, which were a success despite the Khmer Rouge refusing to participate in the peace process. The UNTAC also undertook rehabilitation projects and the repatriation of more than 350,000 refugees from the Thai-Cambodian border. After the election, the new government declared itself a constitutional monarchy under the former Prince Sihanouk who eventually became elevated to the status of king. To this day, despite peace, Khmer Rouge fighters remain in jungles along the Thai-Cambodian border although there have been reports that large numbers of Khmer Rouge troops are deserting. Researchers at Yale University estimate that nearly 3 million Cambodian people more than one in five died during Khmer Rouge's genocidal regime (DHS, 2005; Ebihara, Mortland, & Ledgerwood, 1994; Kiernan, 1996; UNAKRT, 2008; Wikipedia; Yale University, 2008).

Post-conflict evaluation has acknowledged the profound negative impact of political violence on Cambodia's development. Cambodia lost not only the physical infrastructure for economic activity roads, bridges, hospitals, schools but Cambodia also lost the human capital necessary for development. Educated and healthy individuals who are able to provide professional skills in the public (e.g. doctors, teachers, engineers) died in disproportionate numbers under the Khmer Rouge. Of those who have survived, many carry a plethora of health problems both physical and psychological. Mothers whose growth was stunted as a result of inadequate food consumption are now more likely to give birth to low birth-weight babies, perpetuating difficulties from one generation to the next (World Bank, 2006). Psychological scars, post-conflict, can also create inter-generational issues between mothers and their children.

In October 1994, the Cambodian National Assembly approved an agreement with the United Nations on the creation of a tribunal to try five senior leaders of the Khmer Rouge with charges of crimes against humanity and war crimes. The United Nations Assistance to the Khmer Rouge Trials (UNAKRT) was created to represent the international side of the "hybrid" court known as the Extraordinary Chambers in the Courts of Cambodia (ECCC). Senior leaders most responsible for the crimes and serious violations will be tried under both Cambodian and international law. UNAKRT encourages victims of the KR regime to come forward, including victims of sexual violence, and on September 3, 2008 the first victim of gender-based crimes committed by the Khmer Rouge submitted a Civil Party application to the Victims Unit. A culture of silence has prevented many victims from coming forward although genocide researchers confirm that many women were sexually assaulted and gang raped by Khmer Rouge officials during this period. It is thus important to question the extent to which a history of sexual violence has impacted mothers and their children.

The tribunal is scheduled to begin trials in the later part of 2008 with hopes that it may provide satisfactory victims' support for those men and women suffering from mental, physical, social, and emotional health issues as a result of the genocide (DHS, 2005; Ebihara, Mortland, & Ledgerwood, 1994; Kiernan, 1996; UNAKRT, 2008; Wikipedia; Yale University, 2008). (Note: At the time of writing only one of the five charged senior leaders, Kang Khek leu, has been indicted; the other four persons remain under judicial investigation. Up to date coverage can be viewed online at the Cambodia Tribunal Monitor website; www.camboidatribunal.org)

2.1.8.1 Post-conflict Cambodia and Gender

More women than men survived the traumas of the Khmer Rouge period. Cambodian women were better able to survive conditions of severe malnutrition, fewer women were targeted for execution because of connections to the regime, and fewer women were killed in battles. Many women reported that they survived those years of horror because they had to care for their children (Ebihara and Ledgerwood, 2002). The result was a gender imbalanced society in which it was not rare to find rural villages housing no men between the ages of 15 and 50 (Ledgerwood, 1992). This meant that there was a severe shortage of male labour power and many women were forced to take on roles that had previously been performed primarily by men in both agricultural and urban areas. Throughout the 1990s the gender ratio evened out and the sexual division of labour patterns are similar now to what they were pre-Khmer Rouge, but with increased flexibility (Ebihara and Ledgerwood, 2002).

2.1.9 Economy

Cambodia's economy has made significant progress since signing the 1991 Paris Peace Accord. From 2001 to 2004, the economy grew at an average of 6.5% per annum (World Factbook Cambodia, 2008). However, the economy in Cambodia is not able to generate enough jobs in the formal sector to handle the large numbers of young people who are eager for work. There are few waged employment opportunities for women, except in the garment industry (UNIFEM, 2006). It follows that the informal sector, including agricultural labour, has become an important source of income for many Cambodian women. The informal labour sector is not covered by labour laws and thus cannot provide security for the massive number of women it is currently supporting

(UNIFEM, 2006). Further, Cambodian women may face additional barriers to their breastfeeding practice if they are employed in the informal sector with no labour laws. For example, with no guaranteed breaks during the work day, a mother may be unable to come in from the rice fields to breastfeed her child.

2.1.10 Agriculture

Agriculture, primarily rice production, is the main economic activity for Cambodia with more than 75% of the population relying on farming as their only means of remuneration (CIA, 2006). In rural agricultural areas of Cambodia, famers must work extremely hard to make a modest living. Throughout the country, more female workers are found in agriculture than males due to the relatively low occupational and geographical mobility of female workers (Acharya et al., 2003). However, due to chronic poverty, landlessness, and natural disasters many Cambodian farmers are compelled to migrate to other rural areas. For women, migration can facilitate both empowerment and disempowerment. Being able to earn an income to support themselves and their families can allow Cambodian women to become economically self-sufficient which can be an empowering experience. Alternatively, dangerous working conditions and social stigma reinforce the gender stereotype that "good" Khmer women should stay at home and look after their husbands and children, which may be a disempowering experience (Tout, 2004). Further, migrant Cambodian woman are normally forbidden from having babies while employed and thus are deported back home immediately if found to be pregnant (UNIFEM, 2006). Lack of reproductive rights may be one reason among many that Cambodian women leave the informal labour sector in search of alternative employment such as that found working in a garment factory.

2.1.11 Garment Sector

Vast expansions in the garment sector have also aided the economic growth of Cambodia. The garment industry employs more than 350,000 people and constitutes more than 70% of Cambodia's exports (UNIFEM, 2006). Eighty-five percent of garment factory workers are women who have migrated from rural villages to factories in urban areas such as Phnom Penh (World Bank, 2006). The majority of women working in the garment factories are single, aged between 20-24 years, and earn a monthly salary of US$ 50-70 (UNIFEM, 2006). Women from Krong Kep are unlikely to be working in this industry unless they have migrated to an urban area. Thus, opportunities in the garment sector are region specific in Cambodia.

2.1.12 Tourism

The tourism industry assists the Cambodian economy, with foreign arrivals reaching 2 million people in 2007 (World Factbook Cambodia, 2008). For example, the designation of Angkor as a World Heritage Site in 1992 has gained large international attention and transformed Siem Reap into a gateway destination (UNIFEM, 2006). Benefits of tourism can be plentiful and many Cambodian people welcome the plethora of employment opportunities. In Krong Kep, tourism is slowly rising from the ashes of the civil war. Once a seaside resort and retreat for the French elite in 1908, Kep remains bare and largely unwelcoming to tourists. There are several hotels and budget bungalows popping up throughout the city with the hopes of drawing tourists back again (Lonely Plant Cambodia, 2005). However, as expected, there are also negative socio-cultural impacts of tourism on households and communities within Cambodia. The different experiences of men and women participating in tourist oriented employment often

emphasize intra-household inequality for Cambodian women. Gendered social tourism in Cambodia encourages sexual exploitation and human trafficking (Cochrane, 2008). Research done in Cambodia by Steinfatt, Baker, and Beesey (2003) estimates the total number of sex workers, both observed (5,317) and unobserved (12,939), to be 18, 256 persons (women and children). A total of 1,074, 20.2% of the 5,317 observed sex workers were classified as trafficked based on their indentured status or the study's underage criteria of less than 18 years. Such work provides neither economic independence nor a secure living for these women and their families. The lack of employment options for many Cambodian women ensures that they are poor, a fact that has health implications for women and their children and which creates further barriers to successful breastfeeding.

2.2 Poverty

After decades of war and civil strife, Cambodia remains one of the poorest countries in Asia. The Human Development Index and Rate (HDI) rates Cambodia as one of the ten lowest countries among Asia with score of 0.598. Cambodia places 131 on a list of 177 countries (HDI, 2007).[2] One third of the Cambodian population lives on less than US$1 per day in 2006 (DHS, 2005).

The latest socio-economic household survey in 2004 found that 35% of Cambodians live below the national poverty line, down from an estimated 47% in

[2] The Human Development Index (HDI) is an index combining normalized measures of life expectancy, literacy, educational attainment, and GDP per capita for countries worldwide. According to the United Nations Development Program (UNDP) it is a standard measure of human development and assists in determining whether a country is developed, developing, or underdeveloped. A HDI of 0.8 or more is considered to represent 'high development' while a HDI below 0.5 is considered 'low development'. Human Development Report 2007/2008 as cited on http://hdr.undp.org/en/media/hdr_20072008_summary_english.pdf)

1993/94 surveys (NIS, 2004). This reflects a 1.1% average annual rate of poverty reduction (World Bank, 2006). Although encouraging, globally there are other low-income countries that share Cambodia's history of conflict and have achieved higher per annum rates of poverty reduction (e.g. Mozambigue, Vietnam and Uganda). This finding suggests that, given moderately favourable circumstances, the country of Cambodia has the ability to increase the rate of poverty reduction in the future (World Bank, 2006). Assessing the past decade, Cambodia has made significant progress towards the first of the Cambodian Millennium Development Goals (CMDGs), which commits the Cambodian government to halve the proportion of people living below the national poverty line by 2015 (WHO, 2008). In the current context of poverty, however, "repair" of infrastructure is slow thus making recovery a multi-faceted challenge.

2.3 Water and Sanitation

In the aftermath of war, and in the context of pervasive poverty, environmental health conditions in Cambodia rank among the lowest and poorest of South-Eastern Asian countries (WHO, 2008). Environmental health facilities are in short supply, with only 44% of households having access to safe drinking water. Rural households are much more unlikely to have access to safe drinking water and only 16% of rural households have a toilet facility within the premise (NIS, 2004). This significantly increases the risk of spreading communicable diseases within the country. As well, poor environmental conditions reinforce the importance of breastfeeding for basic infant survival. Breastfeeding, in comparison to infant formula which may be mixed with un-clean water, is a safer method to feed Cambodian children.

2.4 Rural Communities, Agriculture and Poverty

Poverty in Cambodia predominantly affects rural households and is associated with landlessness, remoteness from markets and services, lack of productive assets and low levels of education (WHO, 2006). Most people in rural communities have few employment opportunities and rely on agricultural as their sole source of income. However, agricultural productivity and profitability in Cambodia have been low relative to growth in the industrial sectors (e.g. garment sector). The crisis of poverty for rural households is exacerbated by the problem of unclear property rights (DHS, 2005). The result is an emerging phenomenon of rural households lacking money necessary to purchase land for cultivation juxtaposed with the existence of uncultivated land a problem compounded by the lack of facilities and infrastructure in rural regions (World Bank, 2006).

2.5 Health and Poverty

In Cambodia, ill-health and poverty are closely related. Cambodians who receive high-quality health care are likely to remain more productive and thus have more money to spend on essential goods and services. In contrast, Cambodians who suffer from the economic consequences of illness require large expenditures that may ultimately lead their households into poverty. Poor families simply cannot afford quality health care and resort instead to a range of traditional healers and other unqualified (and often unsafe) private service providers (HSP, 2008). The most salient health-related problems related to poverty in Cambodia are malnutrition and lack of access to essential health care (DHS, 2005). Malnutrition often arises in women as mothers choose to go without food in order

to feed their children. Rural women, such as those living in Krong Kep, are particularly vulnerable to these problems.

Ill health also has inter-generational effects in Cambodia. Within the context of fertility rates, larger households tend to be poorer because of higher dependency ratios. Therefore, when poverty rates increase with household size, Cambodian adults are unable to provide adequate health care for their children, resulting in a vicious cycle of reduced opportunities of future earning potential (World Bank, 2006). This vicious cycle can be detrimental for all women due to gender disparity but especially harmful for Cambodian mothers as they struggle to provide for themselves and their children.

2.6 The Status of Women in Cambodia

Anthropological and sociological literature has often stressed the "relative equality" between men and women in Cambodia in comparison to many other developing countries (Ledgerwood, 2005). Women participate actively in the economy and in many cases are responsible for managing the household income and expenditure. However, women continue to be concentrated in low-wage employment sectors and are often paid less than men for the same work (ADI/CCC, 2005). Thus, gender inequalities leading to poverty certainly exist in Cambodia. Gender inequality has been most pronounced with regard to education (schooling for girls was seen as unnecessary), political authority (few women hold political positions that might allow them to shape society), and the double burden that women face in managing domestic tasks while also contributing to income-generating activities (UNIFEM, 2004). The status and empowerment of women in Cambodia is a multifaceted issue.

2.6.1 The Status of Women Post Khmer Rouge

Significantly more men than women died during the conflicts of 1970s resulting in a very unbalanced adult sex ratio in Cambodia (Ledgerwood, 2005). Cambodian men who survived under the KR regime were often forced to serve as soldiers, further decreasing the number of men in Cambodian society. As Ledgerwood notes, "this was particularly evident in rural areas where one could enter a village and find no men between the ages of 15 and 50". This created a plethora of female-headed households, both directly and indirectly, as many surviving men found they could abandon one woman and still get remarried because marriageable men were in short supply. Unfortunately, female-headed households in Cambodia tend to be poorer than those headed by men and this reality often causes female-headed families to suffer from gender-based economic disadvantages (UNIFEM, 2004). Ironically, suffering is a central notion for Khmer Buddhists. Many Cambodian Buddhists believe that "to be born is to suffer, to live is to suffer... there is no happiness without suffering" (Mortland, 1987). Thus, it is within the experience of suffering that many Cambodian men and women ask questions and seek answers in religion. Efforts by the Khmer Rouge to suppress and eliminate religion were largely unsuccessful. Khmer women continue to rise above oppressive situations in their daily lives by turning to Buddhism for comfort and guidance.

2.6.2 Religion

Religion has deep roots in Khmer traditional society, not only in artistic and cultural life, but also in shaping the personality and mentality of the Khmer people

(Marston & Guthrie, 2004). Theravada Buddhism[3] is the predominant religion within Cambodia with a 95% adherent rate (World Factbook Cambodia, 2008). Since the thirteenth century, similar linkages between being "Khmer" and being "Buddhist" have been recorded and are evidenced in contemporary art, literature, and architecture. Buddhist monks with shaved heads and robes appear throughout both urban and rural Cambodia, proof that Buddhism is in existence despite the efforts of the Khmer Rouge to eliminate religion.

A prominent theme in Buddhist texts that lends to the success of Theravada Buddhism in Southeast Asia is the maternal metaphor. The experience of motherhood and of being mothered is positively affirmed in religious texts and is often accompanied by profound maternal imageries. One of the most powerful symbols of protectiveness and compassion found in Buddhist texts is that of a woman nursing a baby at her breast. The offering of milk is often associated with moral goodness and nourishment, and is perhaps the quintessential symbol of motherhood (Andaya, 2002).

Recognized as a 'nurturing religion', Buddhist texts also offer a belief in the regenerative and healing power of a mother's milk. An early Pali text provides a graphic description:

[3] Theravada Buddhism (literally, "The Ancient Teaching") is the oldest surviving Buddhist school. The Theravada school upholds the Pali Canon as the most authoritative collection of texts on the teachings of Gautama Buddha. Theravada promotes the concept that insight must come from one's experience, critical investigation, and reasoning. Theravada uses the Four Noble Truths as theory for reaching liberation from the life cycle and ultimately Enlightenment.

> And when Maddi saw the children in the distance and knew they were safe... she sprinkled them with streams of milk from her breasts... The children rushed up to her, and they too fell senseless on top of their mother. At that moment two streams of milk flowed from her breasts into their mouths, and if they had not received so much relief, the two children must have perished, their hearts parched (Lopez, 1995).

Collectively, optimistic and encouraging images of breastfeeding women in Buddhism provide a solid foundation for Khmer women to support each other and promote breastfeeding within their communities. However, for many Cambodian women who survived the Pol Pot era, traditional ways of conceptualizing answers and support through religion were disrupted, if not destroyed, a fact that may lead to confusion and anxiety. Inadequacy of traditional answers to explain the events that have occurred in Cambodia in the past three decades has led the identities of many Khmer women to be shaken (Ebihara, Mortland, and Ledgerwood, 1994). Thus, when religion- a prism through which Khmers view the world- itself is called into question, one might inquire how its suppression during the Khmer Rouge regime has impacted breastfeeding mothers? How do Khmer women frame the events that occurred to them and their families during the genocide? How do the "ultimate questions" of Cambodian mothers present difficulties within their everyday lives?

One can only assume that answers provided to these women about the genocide in a religious context are unsatisfactory and that their questions about the genocide do not go away. These questions will need to be addressed, answered, and then brought up again (Ebihara, Mortland, and Ledgerwood, 1994). Hopefully within the questioning process progress can be made. And to this extent, survivors of the genocide have made significant progress despite efforts of the Khmer Rouge regime to suppress Buddhism.

For example, Buddhist nuns in Cambodia are currently taking an innovative approach to improving breastfeeding practices. Through a Cambodian non-governmental organization (NGO) called The Reproductive and Child Health Alliance (RACHA), Buddhist nuns are being used to promote and support improved breastfeeding practices including lactation management. The intent of the Buddhist nuns' programme is to utilize a vast network of local, well-respected women to promote optimal breastfeeding and other general preventative health related behaviours. Although it is difficult to determine precise changes, in rural Cambodia Buddhist nuns appear to have a positive impact on infant feeding behaviours, including early and exclusive breastfeeding (Crookston et al., 2007).

The illustration of the Buddhist nuns therefore demonstrates the essence of Khmer spirit, a Cambodian spirit that encompasses strength, courage and characteristics often associated with Buddhism. As Ledgerwood (1994) best states, "to be Khmer is to be Buddhist". Cambodian women thus exemplify this Khmer essence when they collectively rise above their suffering on a daily basis in their roles as friend, daughter, sister, wife, and mother. This strength and cultural perspective needs to be both respected and reflected in breastfeeding support groups.

2.6.3 Marriage Patterns

Marriage patterns, influenced by religion, culture and tradition, often provide insight into a women's status in society. Married life, at the individual level, often affects the amount of autonomy and control a woman has in her life. In Cambodia, the majority of women (52%) do not participate at all in the choice of their husbands. Instead, the decision is made jointly with her family members or solely by the husband and his

family. In the province of Krong Kep, most women (70%) chose their husbands with the help of someone else with less than 2% of women making the sole decision (DHS, 2005). In contrast, almost all married women with children (97%) have full decision making powers in terms of their child's health and schooling (DHS, 2005).

2.6.4 Attitudes Toward Gender Roles

An important aspect of a Khmer woman's status and empowerment is her gender equality in roles and rights in Cambodian society. Gender related attitudes often provide insight into a women's ability to make her own choices. In Cambodia, attitudes may also be indicative of women's lower status relative to men. The Cambodian DHS 2005 explored women's beliefs about gender-egalitarian roles for husbands and wives in the household; the following results are for the province of Krong Kep:

Table 2-1 Gender related attitudes for the province of Krong Kep

Statement	Percent of Women who Disagree with the Statement
Important decisions should be made by men	50.0%
Husbands should not help with household chores	2.0%
Married women should not be allowed to work	53.3%
Wife does not have the right to express her opinion	7.2%
Acceptable for a man to have extramarital sex	92.8%
Wife should tolerate beatings to keep her family together	87.7%
Better to educate sons than daughters	46.4% (n=228)

(adapted from CDHS, 2005)

Interpretation of gender related attitudes may be considered subjective although the DHS study finds that disagreement with statements 1, 3, and 5-7 and agreement with statements 2 and 4 are considered to be the responses most consistent with a great acceptance of egalitarian gender roles. However, it should be noted that to present the data consistently (i.e. in terms of disagreement only) statements 2 and 4 are listed conversely in the table (DHS, 2005).

Overall, the percentage of women giving gender-egalitarian responses varies by statement. 98% of women disagree with the statement that husbands should not help with household chores. Although 93% of women agree that a wife has the right to express her opinion, only 50% disagree with the statement that men should be making important decisions in the household. Likewise, more than half of the women surveyed (54%) believe it is better to educate sons than daughters. These findings may indicate how mothers' attitudes contribute to the health care decisions they make for themselves and their children. The Ministry of Health in Cambodia recognizes this notion and has made various attempts to address gender differences, including the promotion of enrolling daughters in school (MOH, 2004; MOH, 2008). Furthermore, lack of education among females not only contributes to one's decision making skills but also acts as a barrier to women's ability to cope within a stressful environment which can result in violence.

2.6.5 Domestic Violence

Worldwide, domestic violence against women has been acknowledged as a violation of the basic human rights of women in both developed and developing countries. An increasing amount of research highlights the health burdens, intergenerational effects, and demographic consequences of such violence (Kishor and

Johnson, 2006). In Cambodia, women are socialized to accept, tolerate and even rationalize domestic violence (Zimmerman, 1994). The culture of silence around domestic violence makes the collection of data particularly challenging. The DHS 2005[4] reports that just over one-fifth of ever- married women in Cambodia, aged 15-49 years have been victims of physical violence. By region, the prevalence of violence is lowest in Krong Kep (7%) (DHS, 2005). It is also important to examine and question the impact of genocide on ones susceptibility to violence. To what degree has the experience of genocide and war made Khmer women more accepting of violence? And to what degree do genocide and war pre-dispose men to engage in violence?

Violence during pregnancy carries additional risks to women's health and to the health and survival of the unborn child. Due to the added vulnerability from being pregnant, women who experience violence during this period are more likely to suffer from adverse consequences, both mentally and physically. The DHS 2005 states that 3% of ever-married Cambodian women have experienced physical violence during pregnancy. In addition to the negative consequences that violence has on a women's physical health, violence during pregnancy is likely to affect a women's health-seeking behaviour. This suggests that women who experience violence during pregnancy may be less inclined to seek antenatal care. Delayed or non-existent antenatal care will ultimately decrease a woman's chance of receiving quality health care services, including breastfeeding support and education. Khmer women must have available financial resources so that they can solely support themselves and their children if needed.

[4] The CHDS 2005 took multiple measures to ensure the validity of the data and the security of the respondents and interviewers including, but not limited to, the following: sensitive training for interviewers, complete privacy during the interview, informed consent of the respondent, interviewers were able to provide respondents with a list of organizations that provide services or referrals to victims of domestic violence (CDHS, 2005: Domestic Violence, pp.284)

2.6.6 Financial Status

Financial resources often contribute indirectly or directly to a woman's sense of empowerment and status in society. Poverty and lack of job opportunities impede the empowerment of women. In Cambodia, about two-thirds of women are owners or co-owners of the dwelling they reside in (69%) and about half are owners or co-owners of livestock (DHS, 2005). However, many Cambodian women still need the permission of their husbands to sell household assets and family owned land. In the province of Krong Kep, 74% of women own at least one asset alone or jointly, although, only 10% of those women can sell it without permission (DHS, 2005).

2.6.7 Involvement in Society

Involvement in one's society can provide women with a sense of authority and power. As the DHS 2005 notes, "to be fully empowered, women must participate as equal partners in the development and conduct of their societies". In Cambodia, few women (6%) are members of any association, club, or organization. In contrast, women's participation in society by exercising their vote is quite significant with 76% of women almost always or sometimes voting (DHS, 2005). In the province of Krong Kep, an alarming 0% of women are members of some organization while 71% of these women almost always vote (DHS, 2005). Without organizations in which Cambodian women can promote their own health and community needs, Khmer mothers will be unable to support each other in their breastfeeding decisions and maternal needs. If mothers are not involved in their society, it is likely that breastfeeding support programs will remain non-existent in Kep. It is thus the responsibility of Cambodian government officials, including

leaders within the Ministry of Health and community level health care professionals, to ensure the physical safety and health of women and children in Cambodia.

2.7 Cambodia Ministry of Health

The Ministry of Health (MOH) aims to ensure equitable and quality healthcare for all people of Cambodia, regardless of gender, age, residency, or financial ability. The MOH administers health services through 24 Provincial Health Departments (PHD), 76 Operational Districts (OD), 69 referral hospitals, and 966 health centres (see Figure X). Health policy provided by the MOH asserts that all Cambodian's should have access to quality health care and information; the policy especially targets the poor, the vulnerable (mothers and children) and those in areas of greatest need (MOH, 2006).

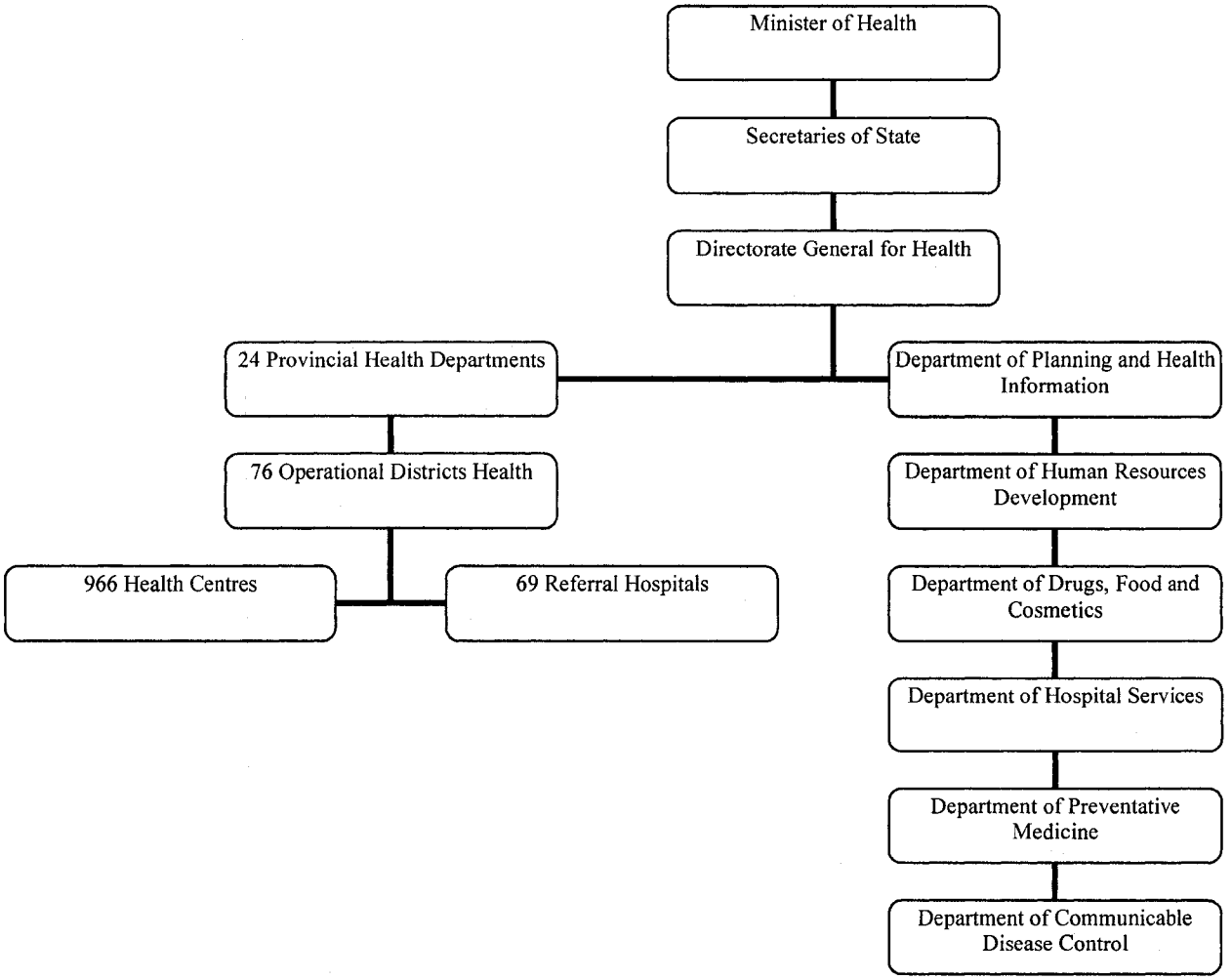

Figure 2-4 Organizational Chart of the Ministry of Health

The following information has been derived from a Cambodian MOH document entitled, Health Strategic Plan 2008-2015 (HSP).The report aims to outline the role of the Cambodian Ministry of Health and provide strategies for improving the "accountability, efficiency, quality, and equity" of Cambodia's health care system (HSP, 2008).

2.7.1 Vision, Mission, and Values

A long term broader vision of the Ministry of Health is "to enhance sustainable development of the health sector for better health and well-being of all Cambodians, especially of mothers and children, thereby contributing to poverty alleviation and socio-economic development: (HSP, 2008). Further, the Mission Statement underlies the Ministry of Health, Royal Government of Cambodia's commitment "to provide stewardship for the entire health sector and to ensure a supportive environment for demand generation and equitable access to quality health services in order that all the peoples of Cambodia area able to achieve the highest level of health and well-being" (HSP, 2008). The Ministry of Health is committed to the values of Equity and the Right to Health for all Cambodians (HSP, 2008).

2.7.2 Working Principles

Common goals are needed by all who are working within health care. The Ministry of Health believes that day-to-day activities of health managers and staff, in all areas throughout the organization, should be guided by five principles:

1. Social health protection, especially for the poor and vulnerable groups
2. Client focused approach to health service delivery
3. Integrated approach to high quality health service delivery and public health interventions
4. Human resources management as the cornerstone for health system wide.
5. Good governance and accountability (HSP, 2008).

2.7.3 Health System Organization

In 1994, the MOH committed to reorganizing the health system, placing an emphasis on the district. Since then, the MOH's main objective for reform has been "To improve and extend primary health care through the implementation of a district based health system." (MOH's Master Plan 1994-1996 in HSP, 2008).

2.7.4 The Operational District (OD) level

The operational district is a sub-unit within the health care system that is closest to the population. It is composed of a referral hospital and health centres. The main role of the OD is to maintain effective and efficient services (preventative, curative, and rehabilitative) according to the needs of the community. Further, the OD level exists to ensure equitable distribution of available resources and to implement provincial polices within the district level of the health system (HSP, 2008).

2.7.5 Health Financing

Years of violent civil war have decimated health infrastructure, personnel and health care services in Cambodia. Accordingly, the public health system is struggling to meet the needs of its population and it is those who are most vulnerable, women and children living in rural areas, who encounter the greatest barriers to accessing health care (MOH, 2006). Cambodian health financing is dominated by out-of-pocket spending. In 2005, the total expenditure on health per capita was US$37 of which 68% (US$25) was out of pocket, while 22% was from donor organizations and 10% was from the MOH (HSP, 2008). Thus, the economic allocation of funding for health care is skewed, with excessive dependence on private services and too little contribution by the public sector (HSP, 2008). Cambodian households have to compensate by spending large proportions

of their total income on low quality care. High out-of-pocket spending can easily push non-poor families into poverty (World Bank, 2006). Skewed allocation of funding undoubtedly reduces money available for public health services and health promotion programs. This ultimately affects impoverished mothers and their children who rely on such services for primary health care and health education such as breastfeeding support.

2.8 Conclusion

In conclusion, this chapter has provided literature findings on significant aspects of Cambodia. Background information that is culture-specific will assist in further understanding nutritional concerns of women and children. Moreover, this chapter offers a strong foundation from which to best understand potential barriers to breastfeeding practices in Cambodia. The next chapter will focus on pertinent issues related to maternal and child health in Cambodia.

3.0 Review of Literature: Maternal and Child Health in Cambodia: Breastfeeding

3.1 Introduction

This chapter begins by reviewing the noted benefits of breastfeeding and current World Health Organization recommendations for breastfeeding initiation and duration. A concise history of breastfeeding and global policies accepted to support breastfeeding is also included. Most importantly, cultural perspectives on breastfeeding and culture specific barriers to breastfeeding in Cambodia are documented. Further, this chapter presents literature findings on important areas of maternal and child health. This section includes as a brief overview of Mother-to-Child transmission of HIV through breast milk

in Cambodia. Most information was obtained from Cambodia's most recent Demographic and Health Survey (2005). In combination with other research, this information is useful in formulating programs and policies to improve maternal and child health services in Cambodia.

3.2 Noted Benefits of Breastfeeding Practices

The health benefits of breastfeeding to both mother and child have been well documented. Benefits of breastfeeding for an infant can be either short or long term (Zeretzke, 1997) (see Table 3-1).

Table 3-1 Short and Long Term Health Benefits of Children Who Are Breastfed

Short Term Benefits to Child	Longer Term Benefits to Child
Reduced risk and lessened severity of diarrhea (Thompson, 2003)	Reduced risk of childhood obesity (CFPC, 2004)
Reduced risk of and lessened severity of infections (Health Canada, 1998)	Reduced risk of gastrointestinal disease (Health Canada, 1998)
Reduced risk of anemia (Kazal, 2002)	Reduced risk of heart disease (Singhal, Cole, & Lucus, 2001)
Reduced risk of childhood communicable diseases (Davis, 2001)	Reduced risk of inguinal hernia (Wyatt, 2002)
Reduced risk of Sudden Infant Death Syndrome (SIDS) (Health Canada, 1998)	Reduced risk of childhood cancer (Lavin, 2001; Linet, Wacholder, & Zahm, 2003)

As adapted from Shields, 2005

In addition to the benefits gained by a breastfed infant, there are also numerous benefits for a breastfeeding mother (Dennis, 2002). Breastfeeding results in a more rapid uterine involution and decreases postpartum bleeding as well as enhancing maternal-

infant bonding (CFPC, 2004; Wong, 2002). It also causes amenorrhea (temporary cessation of the menses), increasing the time between pregnancies by providing 98% effective protection against conception within the first six months postpartum (Labbok, 2001; Dermer, 2001). Breastfeeding may also reduce the risk of breast cancer, ovarian and uterine cancer (AAP, 1997; CFPC, 2004; Lavin, 2001). Breastfeeding has a long-term protective effect on maternal bone mineral density and consequently protects women against osteoporosis (CFPC, 2004). Mothers choosing to breastfed are thus less likely to fracture a vertebrae, hip or pelvis. Furthermore, mothers who breastfeed are more likely to return to their pre-pregnancy weight than mothers who formula feed (Labbok, 2001). Weight loss occurs because breastfeeding mothers burn an average of 500 calories more than formula feeding mothers per day (Dermer, 2001). Although the weight loss benefits of breastfeeding are a "selling" feature in North America, burning calories may not be an advantage in food deprived cultures.

3.3 Recommendations for Breastfeeding Initiation and Duration

The World Health Organization (WHO), the United Nation's Child Fund (UNICEF), the Society of Obstetricians and Gynecologists of Canada (SOGC) and the Canadian Paediatric Society (CPS) unanimously recommend exclusive breastfeeding for the first six months of life for healthy, term infants (CFPC, 2004). The WHO (2004) defines exclusive breastfeeding as the practice of feeding only breast milk (including expressed breast milk) with the exclusion of water, breast milk substitutes, other liquids, and solid food. It is recommended that breastfeeding be initiated within the first hour after birth (CFPC, 2004). Early initiation of breastfeeding is encouraged for numerous reasons. Mothers benefit from early initiation because it stimulates breast milk production

and facilitates the release of oxytocin, which assists the contraction of the uterus and reduces blood loss. Further, the first breast milk contains colostrum which is highly nutritious and has antibodies that protect against infection and diseases. Colostrum satisfies a newborn's thirst and hunger. Lastly, early initiation of breastfeeding also fosters the bond between mother and child (DHS, 2005). The public health organizations listed above additionally advocate that after six months of exclusive breastfeeding, infants should receive nutritionally adequate and safe complimentary foods while breastfeeding continues for up to two years of age or beyond (WHO, 2003).

It must be noted that Health Canada[5] recommends Vitamin D supplementation for all humans, including breastfed infants, to correct for lack of exposure to ultraviolet light in Canada. Health Canada recommends that Vitamin D supplementation be started at birth and continue until the infant's diet includes at least 10 ug (400 IU) of Vitamin D from other dietary sources or until the breastfed infant reaches one year of age (Health Canada, 2004; Zitterman, 2003). In countries such as Cambodia, where exposure to sunlight is plentiful, the WHO suggests that Vitamin D supplementation is not required for breastfed infants (WHO, 2002).

3.4 Competing Discourses that Undermine Breastfeeding

Despite global initiatives aimed at promotion of breastfeeding as the optimal method for providing infants with full nutritional requirements, there still remains a common misconception that the nutritional benefits of infant formula are identical to

[5] Health Canada embraces a population health approach to Vitamin D supplementation believing it is neither practical nor cost-effective to screen all mothers and infants to determine whether they are Vitamin D deficient or at risk for deficiency. Canadian health authorities have held a guideline on Vitamin D supplementation since 1927. Other countries with similar latitudes that recommend a Vitamin D supplement for infants are Germany, Sweden, Finland, the United Kingdom, and the Netherlands. As cited from http://www.hc-sc.gc.ca/fn-an/nutrition/child-enfant/infant-nourisson/vita_d_qa-qr-eng.php.

breast milk (World Health Organization, 2003; Marasco, 1998). When breastfeeding is not recognized as superior to infant formula, international breastfeeding initiation and duration rates decrease (World Breastfeeding Initiative, 1995). Moreover, powerful transnational corporations (TNCs) within the infant formula industry discredit breastfeeding by aggressive promotion of bottle-feeding. The leading TNC in this case is Nestle, the largest food company in the world, which controls between 35 and 50% of the world baby milk market (Rundall, 1993). Such manufacturers provide misleading literature and free samples of infant formula to new mothers. Unethical promotion of infant formula violates and undermines *The International Code of Marketing of Breast Milk Substitutes* which aims to regulate commercial advertising, promotion, and information surrounding breast milk substitutes (International Baby Food Action Network, 1993). (Sanders & Werner, 1997)

3.5 History

According to Greiner (1998), breastfeeding has been used as a means to provide nourishment to the young since mammals existed on earth. Biblical passages and Egyptian historical records indicate that breastfeeding was a common practice recorded as early as 2000 BC (Wickes, 1953). In later writings, 500-600 BC, royalty within the Egyptian, Greek, and Roman empires reported that breastfeeding was a feeding method too common to be utilized by sovereigns and thus wet nurses were employed to breastfeed the royal children (Pilkenton, 2002). The practice of wet nurses was extended over the ages and became a familiar feeding method among all levels of society (Wainwright, 2003).

At least in the Western world, alternatives to breastfeeding gained popularity in the late 15th century (Pilkenton, 2002). Many mothers began substituting cow or goat's milk for their own breast milk (Wickes, 1953). The breast milk substitute was delivered by enabling the child to suck from hollow horns or to drink from cans (Pilkenton, 2002). In the late 16th century, when problems associated with these milks began to show, breast milk substitute practices began to decrease and there was a resurgence of mothers breastfeeding their own children (Wickes, 1953). It was not until the 19th century that the next alternative was created. Described as "dry nursing", infants were fed a mixture of flour (bread or cereals) with broth or water (Pilkentron, 2002). However, it soon became evident that due to the uneven availability of food, those in urban areas were more likely to supplement breastfeeding than those in rural regions (Pilkentron, 2002). This practice may be considered a precursor to the current use of synthetic infant formula and demonstrates that many stakeholders, including cereal manufactures, have an invested interest in breastfeeding.

3.6 Breastfeeding and Human Rights

Breastfeeding is political. Many stakeholders, other than the primary mother and child, have interest and some influence in the breastfeeding situation. Additional stakeholders may include the father, siblings, extended family and friends. As well, health care professionals, governments, and a variety of commercial organizations may act as indirect or direct stakeholders in the mother and child feeding relationship (Kent, 2006). However, it must be noted that many secondary parties have other interests. For example, fathers may feel jealous of the unique bond between mother and infant, employers may want breastfeeding mothers back to work sooner than they are ready, and

commercial interests may want to sell products. Moreover, because the infant has little direct power in the feeding relationship, laws must represent the interests of the child (Kent, 2006).

The foundation for the human rights of children lie within the Universal Declaration of Human Rights, which states in article 25(1), that "everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food..." (Universal Declaration of Human Rights, 1948). Several international declarations have also helped to shape the consensus that children have the human right to adequate food. A joint WHO/UNICEF (1980) affirmation states:

> Breastfeeding is an integral part of the reproductive process, the natural and ideal way of feeding the infant and a unique biological and emotional basis for child development. This, together with its other important effects, on the prevention of infections, on the health and well-being of the mother, on child-spacing, on family welfare, on family and national economics, and on food production, makes it a key aspect of self-reliance, primary health care and current development approaches. It is therefore a responsibility of society to promote breastfeeding and to protect pregnant and lactating mothers from any influences that could disrupt it.

Furthermore, International Human Rights Law (1990) expands the concept of child feeding practices to include the accessibility of health promotion education as stated in article 24 of the Convention on the Rights of the Child (1990):

> To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents.

The human rights approach can be helpful when determining the rights of infants (Kent, 2006). Safety nets must be established in all communities, regardless of economics, to prevent health conditions from falling below a certain level. Children have the right to be breastfeed. However, it is worth noting that the human rights approach

may be harmful to the promotion of breastfeeding if universal policies and laws do not recognize cultural and historical differences among countries. Some researchers have suggested that international human rights standards are only one way (the Western way) of protecting human dignity (Moffat, 2001). Human rights approaches have been criticized for assuming, constructing, and interpreting the experiences of women within developing countries (Kent, 06). Thus, international human rights norms must incorporate cross-cultural dialogue and explore the ways in which gender and culture may influence public health practices (Savell, 1996). Overall, mothers are not obligated to breastfeed; however, no one should be able to interfere with the mother's right to breastfeed her child. As Kent (2006) notes, "Breastfeeding should be viewed as the right of the mother and child together" (p.8).

3.7 Policies Designed to Provide Support for Breastfeeding

The need for policy makers and health care professionals to support and encourage exclusive breastfeeding is emphasized by both the World Health Organization (WHO) and UNICEF (Humenick & Gwayi-Chore, 2001). An initial document, *International Code of Marketing of Breast- Milk Substitute*, produced by the WHO and UNICEF (1981), was created in response to the realization that poor infant feeding practices were a major cause of mortality in infants and young children (WHO, 2008). The aim of the code was to contribute "to the provision of safe and adequate nutrition for infants, by the protection and promotion of breastfeeding, and by ensuring the proper use of breast-milk substitutes, when these are necessary, on the basis of adequate information and through appropriate marketing and distribution" (WHO, 1981). Review and evaluation of the framework identifies that many industrialized countries adopted the

principles outlined in the document and reached agreements with manufacturers and governments to prohibit the distribution of free and low-cost formula in hospitals (WHO, 1996; Humenick & Gwayi-Chore, 2001).

In 1989, a second document, entitled the *Ten Steps to Successful Breastfeeding*, was developed with the purpose of supporting and promoting breastfeeding in hospitals (Humenick & Gwayi-Chore, 2001). Soon after, the *Innocenti Declaration on the Protection, Promotion, and Support of Breast-feeding* (1990) was written as a basis for international health policy (WHO, 1998). The *Innocenti Declaration* suggested that all governments develop national breastfeeding policies and recommended that all countries appoint a national breastfeeding coordinator (who would oversee the designation of Baby Friendly hospitals) and that countries establish a multi-sectoral national breastfeeding committee (Shields, 2005).

The Baby Friendly Hospital Initiative (BFHI)[6] was launched in 1991 by WHO and UNICEF, based on former international documents that outlined breastfeeding policies and practices. Hospitals and birthing centres can be given the designation of "Baby Friendly" when all Ten Steps to Successful Breastfeeding have been fulfilled (see Appendix G). The BFHI is a global initiative aimed at improving maternity services for pregnant women, mothers and infants worldwide and for protecting, promoting, and supporting breastfeeding (WHO, 2006).

[6] Since its launching in 1991, BFHI has grown, with more than 20,000 designated facilities in 152 countries. The National Maternal and Child Health Center in Phnom Penh, Cambodia is recognized as being `Baby Friendly` thus practicing all Ten Steps to Successful Breastfeeding. (WHO, September 2004).

3.8 Global Rates of Breastfeeding

On a global level, rates of exclusive breastfeeding have been increasing during the last decade in many countries due to concerted programming efforts (WHO, 2008). A recent report published by UNICEF entitled "The State of the World's Children 2008" suggests that the percentage of children in the world who are exclusively breastfeed (< 6 months) is 38% (UNICEF, 2008). This percentage accounts for the low rates of exclusive breastfeeding in the least developed countries and elevated rates in industrialized nations.

In Canada, rates of breastfeeding initiation are relatively high in comparison to other countries in North America. Breastfeeding initiation rates in Canada have increased steadily with a national average initiation rate of 73% in 1994/1995 (Statistics Canada, 1995) More recent national surveys have found that breastfeeding initiation rates in Canada may be closer to 80% (Health Canada, 1999). Further, national statistics reveal a breastfeeding duration rate of 35%; thus, the percentage of women who are breastfeeding exclusively for the recommended six months minimum is relatively high. Percentages of women exclusively breastfeeding vary between Canadian provinces from 33% in Newfoundland to greater than 50% in Ontario (Dennis, 2002; Health Canada, 1999; Shields, 2005). Various factors likely account for the differing rates of breasting in Canada including urbanization, community and family support, and cultural traditions and beliefs as found in other areas of the world.

In European regions, infant feeding recommendations appear to vary considerably between western and eastern Europe. In many Eastern Europe countries, guidelines have been influenced by the former Soviet Union, which held recommendations that differed from international standards including late initiation of breastfeeding (6-12 hours after birth) and complete cessation of breastfeeding by 10 months of age. Owing to lack of

comprehensive and comparable data and of standardized international definitions, the WHO noted, "it is difficult to make a general statement about the prevalence of exclusive breastfeeding in the European Region". That being said, literature displays ranges of exclusive breastfeeding for six months from less than 10% in Georgia and Kazakhstan to almost 40% in Nordic countries including Norway, Sweden, and Poland (WHO, 2000). Overall, trends in maternal and child health remain encouraging in most European countries.

In Latin America and the Caribbean, many countries are progressing towards the health objectives of the Millennium Development Goals including improving maternal and child health. The state of child survival in the region, among the most vulnerable children, displays rates of approximately 308,000 deaths of children before their fifth birthday (2006). This number reflects the region's remarkable strides in reducing mortality rates of children owing to a combination of factors including an increase in awareness of the importance of breastfeeding. Unfortunately, a lack of disaggregated statistics in several countries in the region complicates the efforts by health care officials to measure overall rates of exclusive breastfeeding for Latin America and the Caribbean. Specific country statistics exhibit a range of exclusive breastfeeding (< 6 months) rates from 4% in Dominican Republic, 24% in El Salvador and 63% in Chile. In general, the tremendous progress made by Latin America and the Caribbean in reducing inequalities associated with maternal and child health has much to teach the world.

On the continent of Africa, rates of exclusive breastfeeding up to six months remain low, particularly in Central, Southern, and West Africa. Rates of exclusive breastfeeding (< 6 months) among regions within Africa range from 16% in The Sahel to

42% in Eastern Africa (UNICEF, 2007). These rates and further statistics display a striking contrast in the nutritional status of children between African countries with the highest rates of malnutrition and undernourishment among children living in sub-Saharan Africa. The percentage of children who are exclusively breastfed (< 6 months) in sub-Saharan is 30% with rates as low as 9% in Somalia and 1% in Djibouti. UNICEF has declared sub-Saharan Africa as the most difficult place in the world for a child to survive until age five (UNICEF, 2007).

In East Asia and the Pacific, the rate of exclusive breastfeeding for six months is 35.5%, ranging from 5% in Thailand to 65% in the Democratic People's Republic of Korea. In the Philippines, the rate of exclusive breastfeeding fell from 20% in 1998 to 16% in 2003 largely due to inappropriate feeding practices, including the use of infant formula. In contrast, Cambodia has experienced a rise in women who are exclusively breastfeeding their infants during the first six months of life. The rates have increased from 11% in 2000 to 60% in 2005 (DHS, 2005; UNICEF, 2008).

3.9 History of Breastfeeding in Cambodia

Cambodia's tragic history of more than 25 years of civil strife has prevented the use of trend analysis on matters related to maternal and child health. The recent genocide from 1975-1979 exacerbated the issue, destroying libraries and targeting killings towards people with qualifications such as doctors, lawyers, and teachers (Ebihara, 94). Essentially, there is a general lack of available information on nutrition practices in Cambodia, more specifically a lack of historical information on infant feeding patterns. Lack of specific maternal and child research leads one to ask, "What happened to Cambodian mothers who attempted to breastfeed their children during the Khmer

Rouge?" and "What is the role of conflict on the promotion of breastfeeding?" Further, one may question the role of sexual abuse being used as a weapon during the genocide, thus asking, "To what extent does sexual abuse act as a barrier to breastfeeding practices for Cambodian women?"

Research done on breastfeeding and the sexual abuse survivor suggests that past sexual abuse can affect many aspects of a women's current level of functioning, including breastfeeding and parenting (Kendall-Tackett & Marshall, 1998). Sexual abuse survivors may experience a range of possible symptoms that may affect breastfeeding to varying degrees. Kendall-Tackett & Marshall (1998) summarize from a large amount of research the following symptoms that sexual abuse survivors may or may not experience (see Table 3-2).

Table 3-2 Symptoms experienced by sexual abuse survivors that may affect breastfeeding

Symptom	General Overview as it Pertains to Breastfeeding
Post-Traumatic Stress Disorder (PTSD)	- Mothers may experience sudden and intrusive flashbacks of their abuse during labour and delivery or when breastfeeding
Cognitive distortions	- Mothers may perceive themselves as weak and enter a state of "learned helplessness"; When they encounter breastfeeding difficulties that may assume there is nothing they can do to help
Emotional distress	- Mothers may experience depression, anxiety, and anger which can have a negative effect on how they interact with their children
Impaired sense of self	- Mothers may have difficulty separating their emotional states from the reactions of others causing them to be unable to mobilize necessary support from family/friends
Avoidance	- Mothers may have problems with interpersonal relationships characterized by a low interdependency, self-disclosure and warmth - For the breastfeeding mother this style may blunt her ability to read and respond appropriately to her infant's cues
Physical health & Susceptibility to illness	- Physically some mothers may be unable to tolerate the feeling of the infant on the breast. They may indicate babies are 'biting' when there is no evidence of this. - In the newest area of study, findings indicate that a sexual abuse survivor may be at increased risk for health problems especially those with strong mind-body component (ie. Irritable Bowel Syndrome)

(as adapted from Breastfeeding and the Sexual Abuse Survivor by Kendall-Tackett & Marshall (1998)

Health care professionals in Cambodia must be aware of Cambodian history when assisting women in their breastfeeding practice. They must remember that every mother is different and what may be an issue or problem for one mother may not be for another. In dealing with victims of abuse it is best that health care professionals offer suggestions that will make breastfeeding more comfortable and refer women to professional expertise in breastfeeding when possible. Further, breastfeeding advocates must realize that best practices, especially from a global perspective, may or may not be the best practice for breastfeeding mothers in Cambodia. It is thus imperative to ask, "What has been the role of foreign NGOs in aiding breastfeeding promotion?" and "To what extent has maternal and child health care in Cambodia been shaped by a Western biomedical model?" Health policies and interventions in Cambodia must first consider the past before planning health promotion programs for the future (Kendall-Tackett & Marshall, 1998).

3.10 Policy in Cambodia

In Cambodia, few governmental policies exist on issues of reproductive health. The following table provides an overview of policies designed to protect the reproductive and sexual health rights of women in Cambodia (see Table 3-3).

Table 3-3 Health Policies in Relation to Reproductive and Sexual Health of Cambodian Women

Health Policy	General Overview
National Policy on Birth Spacing (1995)	- Eighteen policy statements detail that birth spacing promotes maternal and child health and should be accessible and safe - Couples and individuals have the right to decide on the number and spacing of their children
Law and Prakas on Abortion (1997 & 2001)	- The Abortion Law legislated abortion in 1997 and The Prakas for Implementation was signed in 2001 - Only health care professional authorized by the MOH can perform abortions in a MOH authorized facility - Abortions can be performed only at less than twelve weeks pregnancy or in certain cases
Safe Motherhood Policy and Strategy (1997)	- The 'four pillars' of Safe Motherhood (family planning, antenatal care, clean labour and delivery, and essential obstetric care) are intended to be integrated into all levels of the Cambodian health care system as a foundation for increasing the equity for women
National Policy for the Prevention of Mother-to-Child Transmission of HIV (2001)	- Main objectives of the policy are prevention of HIV infection, prevention of stigma and discrimination, provide and improvement of access and quality of support services, and expansion of information on reproductive health and HIV/AIDS/STIs
National Strategic Plan for Child Survival (2006)	- Guide for stakeholders in designing, implementing and evaluating projects aimed at infant health and survival - Six components include policy setting, community action, health service delivery, human resources, financing and evaluation - Focus on specific interventions including tetanus vaccination, vitamin A supplementation, and immediate exclusive breastfeeding

(as adapted from National strategy for reproductive and sexual health in Cambodia MOH, 2006)

The Millennium Development Goals (MDGs) were created in 2000 to respond to the world's main development challenges, including poverty and hunger, and consequently are broadly defined (WHO, 08). In 2003, Cambodia localized the MDGs and tailored them to meet the specific development needs of the Cambodian people. Of the nine major development goals, the following three directly relate to maternal and child health: promote gender equality and empower women, reduce child mortality, and improve maternal health. Thus, for each Cambodian Millennium Development Goal (CMDG) there are several indicators (categories of things that can be measured) and their corresponding target (the actual level that an indicator needs to be at by the year 2015 to have achieved that part of its particular goal) provided by the Ministry of Health (DHS, 2005). In regards to breastfeeding practices the subsequent table provides a framework for measuring progress (see Table 3-4).

Table 3-4 CMDG indicators and targets of the MOH in Cambodia

Indicator	Baseline 2000	Target 2005	Target 2010	Target 2015
% of mothers who start breastfeeding within 1 hour of birth	11%	28%	45%	62%
% of infants exclusively breastfed up to six months of age	11.4%	20%	34%	49%

(as adapted from National strategy for reproductive and sexual health in Cambodia MOH, 2006)

Overall, mothers in Cambodia were able to meet and exceed the 2005 target for initiation of breastfeeding within 1 hour. Mothers in rural and urban residences displayed percentages of 34.7% and 37.9% respectively (DHS, 2005). However, rates of exclusive

breastfeeding remain low for both rural and urban mothers, averaging only 3.4 months and 2.4 months of exclusive breastfeeding (DHS, 2005). The percentage of infants exclusively breastfed up to six months of age was not measured in Cambodia's Demographic and Health Survey. Accordingly, the United Nations suggests that Cambodia is unlikely to meet Goal 4 (Reduce Child Mortality) unless vital actions are taken to reduce the very high rates of child malnutrition (WHO, 08).

3.11 Breastfeeding Initiation and Duration in Cambodia

3.11.1 Breastfeeding Initiation

Early initiation of breastfeeding is encouraged to maximize health benefits for both mother and child. The World Health Organization (WHO) recommends that breastfeeding be initiated within the first hour after birth. In Cambodia, approximately one third of children are breastfed within one hour of birth (35%) and 68% within one day of birth. A small difference in the timing of initial breastfeeding by gender occurs as a larger percentage of females are breastfed within one hour and one day than are males (see Table 3-5).

Specifically within the province of Krong Kep, almost all children (97%) are breastfed at some time. Among children ever breastfed (male and female), statistics are slightly lower than national averages; 31% of children breastfed within 1 hour of birth while 62% are breastfed within 1 day of birth.

Table 3-5 Initial breastfeeding by Sex

Sex	Percentage who started breastfeeding within 1 hr of birth	Percentage who started breastfeeding within 1 day of birth[7]	Percentage ever breastfed
Male	33.4%	66.2%	96.6% (n= 3,901)
Female	36.8%	70.5%	97.1% (n= 3,887)

3.11.2 Prelacteal Feed

Breastmilk is the optimal source of nutrition for infants during the first six months following birth. Other liquids, including boiled water, are not needed. Prelacteal feeds occur when children are given something other than breastmilk during the first three days of life. In Cambodia, more than half of all breastfed children receive a prelacteal feed (56%) (DHS, 2005). The most common types of prelacteal liquids given to Cambodian children are plain water (76%) and sugar or glucose water (35%) (see Figure 3-1). In the province of Krong Kep, 64% of children ever breastfed received a prelacteal feed. This is especially problematic when water used for prelactal feeds is not boiled.

Rates of exclusive breastfeeding decline as the age of the child increases. This means that, contrary to WHO's recommendations, less than half of Cambodian children age 4-5 months are exclusively breastfed (see Table 3-6). Exclusive breastfeeding beyond 6 months of age is not recommended.

[7] Includes children who started breastfeeding within one hour of birth

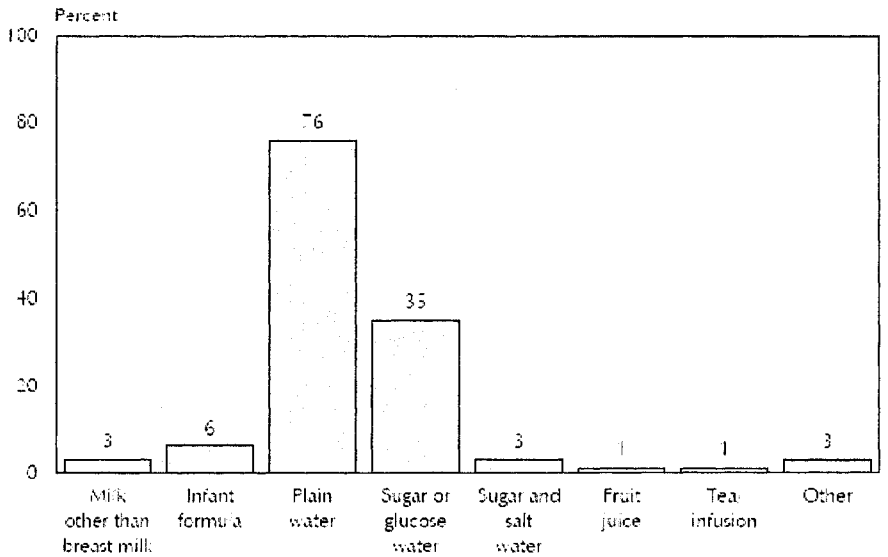

Figure 3-1 Among Last-born Children Born in the Five Years Preceding the Survey Who Ever Received a Prelacteal Liquid, the Percentage Who Received Various Types of Liquids

Table 3-6 Exclusive breastfeeding status by age

Age in months	Percent exclusively breastfed
0-1	74%
2-3	63%
4-5	45%
6-8	6%

3.11.3 Duration and Frequency of Breastfeeding

In Cambodia, the median duration of any breastfeeding is 21.0 months, while the mean duration is 21.6 months (DHS, 2005). Rural children are breastfed for a slightly longer duration (21.5 months) than urban children (19.0 months) (DHS, 2005). Similarly, rural children are exclusively breastfed significantly longer (3.4 months) than urban children (2.4 months). There is no difference in the duration of breastfeeding by sex of

the child (DHS, 2005). In the province of Krong Kep, the median duration of any breastfeeding is 22.8 months and 3.5 months of exclusive breastfeeding.

The majority (97%) of Cambodian children less than six months of age are breastfed 6 or more times in a 24 hour time period. Breastfeeding is slightly more frequent in the daytime than at night, with the mean number of feeds in the daytime being 5.9 compared with 5.2 at night. Similarly, the mean number of day feeds (5.7) is higher than mean number of night feeds (4.9) within the province of Krong Kep.

3.12 Competing Discourses that Undermine Breastfeeding in Cambodia

In Cambodia, failure to recognize breastfeeding as an optimal method for infant feeding among Khmer women is exacerbated by a lack of culturally appropriate research. Although researchers have examined individual characteristics, ethnicity, and social constructs to describe factors that influence breastfeeding practices in developing countries, little work has been done within Cambodian populations (White, 2002). According to Meleis (1996), understanding one's socio-cultural context is particularly important when conducting research among marginalized groups, so that one does not stereotype or resort to cultural relativism. Universalizing policies can lead to blaming of victims who face circumstances that are not understood by researchers (Moffat, 2001).

3.13 Cultural Perspectives on Breastfeeding

The decision to breastfeed is strongly influenced by ethnic trends and beliefs (Kannan et al., 1999). Van Esterik (1995) proposed "one can tell a great deal about the values of a cultural group by the value they place on breast milk" (pg.57). Unfortunately, extant literature concerning beliefs and practices of Khmer women during pregnancy and childbirth in Cambodia is limited. Several studies have been published that describe the

childbearing beliefs and practices of Khmer refugee women in camps along the Thai-Cambodian border or Khmer women resettled in other countries (ie. Australia, France, Canada), however, it is unreasonable to believe that these studies represent current beliefs and practices of Khmer women living in Cambodia (Choulean, 1982; Douglas, 1994; Frye, 1989; Hansen, 1988; Rice, 1994; Sargent, Marcucci, & Elliston, 1983). Apart from one study (White, 2004), which contains some beliefs of Khmer women in Cambodia regarding postpartum practices, most information is found in baseline studies performed by nongovernmental organizations (NGOs) engaged in maternal and child heath projects. No research has been specifically undertaken to explore the perspective of culture-specific beliefs and practices and exclusive breastfeeding. The absence of this information in an environment where child malnutrition is extremely high confirms the need for this study and further culture-specific research.

3.14 Culture Specific Barriers to Breastfeeding

Although an exhaustive definition of "culture" is difficult to articulate, most scholars would concur that "cultures are dynamic and changing, both internally and in response to external forces and influences" (Savell, 1996). Thus as cultures continue to change so too do the barriers to health care services that are found within these cultures. An extensive literature search of barriers to exclusive breastfeeding practices for women living in Cambodia identified the following categories: personal characteristics, antenatal care, cultural beliefs and practices, sources of support, and poverty. As noted by Dennis (2002), when culture-specific factors are not addressed or are experienced negatively, the factor will become a barrier to successful breastfeeding (Dennis, 2002).

3.15 Personal Characteristics

Personal characteristics of mothers may influence their decisions to initiate breastfeeding and to continue exclusive breastfeeding for the recommended six months minimum. However, in Cambodia, the percentage of children ever breastfed does not vary much by maternal background characteristics (DHS, 2005).

3.15.1 Maternal Age

Maternal age is an important factor influencing the decision to initiate breastfeeding. Biologically, no differences in quality or quantity of breastmilk have been associated with maternal age (Tilson, 1990). Young mothers, including adolescents, can lactate and do produce adequate milk for infant nourishment. This is a benefit in developing countries, such as Cambodia, where reproductive years often begin in adolescence. However, young mothers still struggling for the establishment of their personal identity my experience a range of barriers if they attempt breastfeeding before they are emotionally ready (Tilson, 1990). Similarly, older mothers face unique personal challenges including having many other demanding responsibilities and overall fatigue (Batzdorff, 2002).

3.15.2 Maternal Education

Maternal education is also an important factoring influencing the decision to initiate breastfeeding. In Cambodia, highly educated mothers (secondary and higher) are more likely than those with little or no education to put their newborn to the breast within the first hour or day of birth (DHS, 2005). However, low rates of education overall among Cambodian women ensures that maternal education remains a barrier to breastfeeding practices.

3.15.3 Maternal Employment

The prospect of needing to go back to work discourages some mothers from attempting to breastfeed (Guttman & Zimmerman, 2000). Re-entering the workforce among other unconstructive forces- women's relatively short-term maternity leave, inflexible work hours, and lack of a conducive work environment- negatively affects sustained breastfeeding practices (Shields, 2005). However, in developing countries the impact of maternal employment on breastfeeding practices may be greater with severe consequences for both mother and child. This is because Cambodian women are often working in vulnerable occupations and facing appalling conditions of poverty.

3.16 Antenatal Care

Maternal and child well-being and survival are dependent on the health care that a mother receives during pregnancy and at the time of delivery. Antenatal care (ANC) coverage is best described according to the stage of pregnancy at the time of the first and last visits, type of provider, number of ANC visits, and information provided during ANC. The WHO and UNICEF recommend a minimum of four ANC visit during pregnancy (UNICEF, 2008).

In rural Cambodia, more than two in three (68%) women received ANC from a trained health care provider (THP) at least once. Trained health care providers are personnel with the necessary skills to handle typical deliveries safely and the ability to recognize the onset of complications during pregnancy and delivery. Further, they are able to provide treatment and refer pregnant woman for emergency care (UNICEF, 2008). In developing countries, THPs are usually physicians, nurses, or midwives. Further, the usage rate of 68% in Cambodia signifies an increase in antenatal care

coverage up from 38% in 2000 (DHS, 2001). In comparison with older women, younger women are more likely to receive antenatal care from a person with training. As well, the use of antenatal care services is strongly associated with the mother's level of education. Women more likely to receive antenatal care from a trained professional are those with a secondary education or higher. Likewise, 46% of uneducated women receive no antenatal care. In the province of Krong Kep, the use of a midwife is the most common ANC provider (65%) during pregnancy (see Table 3-7) (DHS, 2005).

Table 3-7 Antenatal Care in Krong Kep Province (DHS, 2005)

Antenatal Care Provider	Percent
Doctor	0.6%
Nurse	3.3%
Midwife	65.1%
Traditional Birth Attendant	0.4%
Other	0.0%
No one	30.6%
Total	**100.0%** **(n= 290)**

To prevent adverse outcomes, antenatal care is most beneficial when it is sought early in the pregnancy and is continued throughout pregnancy. Most health professionals recommend that the first antenatal visit occur within the first three months of the pregnancy and continue on a monthly basis through week 28 of pregnancy and fort-nightly until birth (DHS, 2005). In Cambodia, 23% of women attend their first antenatal care visit before the fourth month of pregnancy with the median duration of pregnancy for the first ANC visit approximately 4.2 months. This indicates that women living in Cambodia start antenatal care at a relatively late stage of their pregnancy (DHS, 2005).

3.16.1 Place of Delivery

Increasing the proportion of babies being delivered under the supervision of a trained health professional is an important component in reducing the health risks to mothers and children. Hygienic conditions during delivery, regardless of location, can reduce the risk of complications and infections. Appropriate medical attention during childbirth, if necessary, may prevent severe illness or death to either the mother or baby.

In Cambodia, a large majority of babies (78%) are delivered at home, with only 22% being delivered in a health facility (DHS, 2005). Rates are slightly higher in the province of Krong Kep with 82.5% of babies being delivered at home (see Table 3-8).

Table 3-8 Place of Delivery in Krong Kep Province (DHS, 2005).

Place of Delivery	Percent
Public sector Health Facility	11.5%
Private sector Health Facility	6.0%
Home	82.5%
Total	**100% (n= 390)**

In comparison, the rate of home births by a certified midwife in Canada cannot be calculated because the practice of midwifery is not regulated in all Canadian provinces and territories. Canadian provinces that have regulated midwifery include Alberta, British Columbia, Manitoba, Ontario, Quebec, Saskatchewan and the North West Territories (Canadian Association of Midwifes, 2008). However, a study by Davis (2005) of 2,000 women from North America (Canada and the United States) concluded that home births with a certified midwife are safe for low risk pregnancies. Mothers in the study reported a high level of satisfaction and needed less medical interventions from birthing tools such as forceps (Davis, 2005).

3.16.2 Assistance at Delivery

During delivery, a trained health care provider is recognized as critical for the reduction of maternal and neonatal mortality. In Cambodia, 44% of total births are delivered with the assistance of a trained health provider (DHS, 2005), an increase from 32% in 2000 (DHS, 2001). Furthermore, over half of births (55%) are delivered with the assistance of a traditional birth attendant (TBA). Traditional birth attendants are health care personnel who have learned their skills through apprenticeship or who may be self taught (UNFPA, 2006). Table 3-9. compares the advantages and disadvantages of traditional health care providers and traditional birth attendants in Cambodia according to research done by the UNFPA and the MOH (see Table 3-9). Further, in the province of Kep, 58.4% of women received obstetric care during delivery from a TBA (see Table 3-10).

Table 3-9 Advantages and Disadvantages of THPs and TBAs in Cambodia

	Advantages	**Disadvantages**
Traditional Birth Attendants	- necessity where no THP's exist - inexpensive - non-discriminatory - convenience of location	- lack of hygiene - unsafe traditional practices - lack of diagnosis skills - no ANC consultations
Trained Health Care Providers	- safety and reliability - professional training - good hygiene - diagnosis skills	- corruption and discrimination - costs/fees - inconvenience of location - occasional rudeness

(as adapted from UNFPA and MOH, 2006)

Table 3-10 Assistance during Delivery in Krong Kep Province (DHS, 2005)

Provider	Percent
Doctor	3.9%
Nurse	0.0%
Midwife	37%
Traditional Birth Attendant	58.4%
Relative/Other	0.7%
Total	**100%** **(n= 390)**

3.17 Postnatal Care

The first 48 hours after delivery are significant for both mother and child. As a large proportion of maternal and neonatal deaths occur during this time period, it is imperative that all women receive a health check-up within two days of delivery (DHS, 2005). Recently, in Cambodia, safe motherhood programs have emphasized the importance of postnatal care. However, in rural provinces such as Krong Kep, a mere 24% of women are utilizing postnatal care within the first 48 hours post delivery. Further, an alarming 37% of mothers receive no postnatal check-up (DHS, 2005).

Many different factors contribute to the low rates of postnatal care. These factors prevent women from seeking medical advice and treatment both pre and post delivery. In Krong Kep province, the greatest problem in accessing health care arises from a concern that there will be no drugs available at the health care facility (see Table 3-11). Further, 90% of women could not afford treatment. Financial limitations thus impede Khmer mothers from receiving adequate care. Monetary problems stemming from a lack of job opportunities must be addressed within the wider context of poverty in Cambodia. In total, 99.7% of women reported that they have at least one problem in accessing health care.

Table 3-11 Problems in accessing health care in Krong Kep Province (DHS, 2005)

Problem in accessing health care	Percent
Getting permission to go for treatment	12.0%
Getting money needed for treatment	89.6%
Distance to health facility	54.5%
Having to take transport	58.3%
Not wanting to go alone	64.9%
Concern no female provider available	59.2%
Concern no provider available	9.4%
Concern no drugs available	94.9%
At least one problem in accessing health care	99.7% (n= 839)

3.18 Cultural Beliefs and Practices

Strong traditional beliefs exist surrounding pregnancy and childbirth which affect how Khmer women view breastfeeding. A report by the Ministry of Health (MOH) and United Nations Population Fund (UNFPA) found that at least three quarters of Cambodian women use some form of traditional practice during pre and/or post natal care (UNFPA, 2006). However, knowledge transfer from the Western world has resulted in traditional practices being adapted towards a biomedical framework. This adaption can present a dilemma when decisions regarding infant feeding practices need to be made and thus Cambodian women may experience biculturalism or "walking in two worlds" (Dodgson & Struthers, 2005).

As in other Asian cultures that believe in humoral theory, in Cambodia postpartum is considered a time of coldness where heat that has been lost during the birthing process must be restored (Kaewsarn, Moyle, & Creedy, 2003; White, 2004). For this reason, Khmer women often cover up immediately after birth despite tropical temperatures. Figure 3-2 displays a photo of a Khmer woman, a few days postpartum, wrapped in a head covering and wearing a long-sleeved shirt and pants to restore heat.

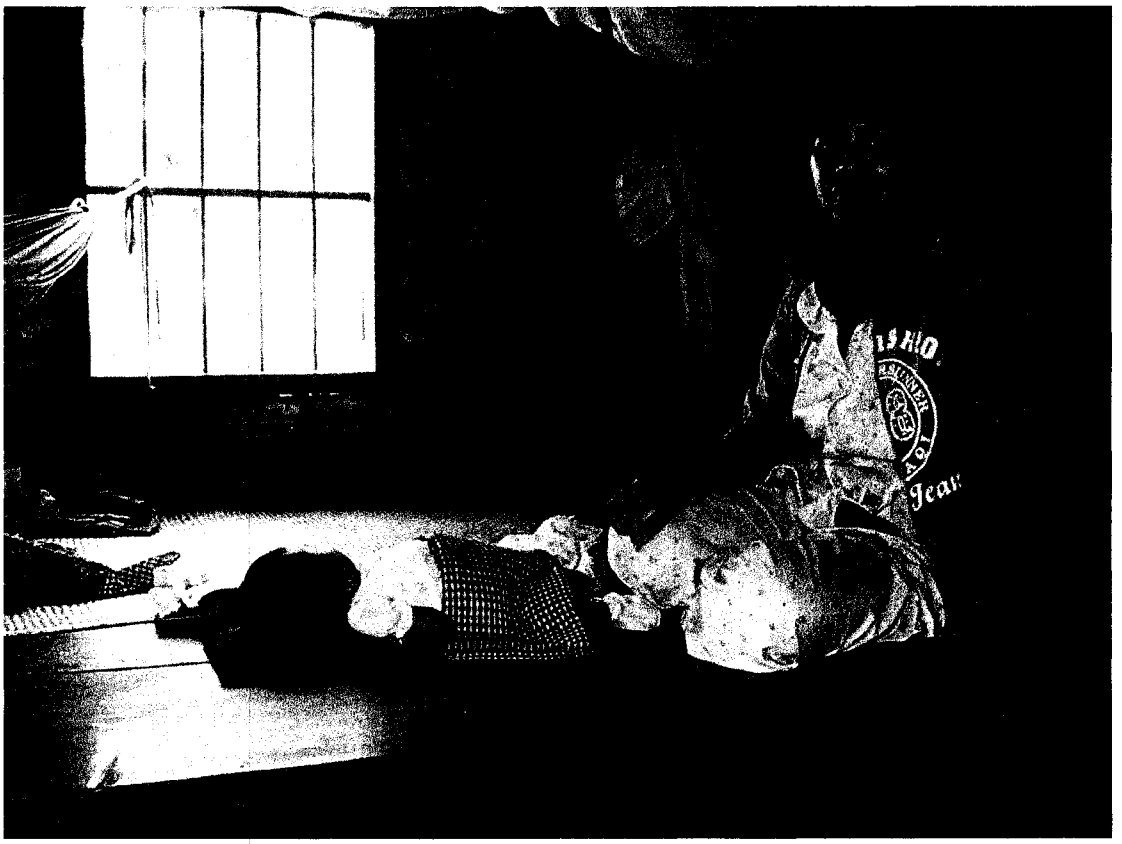

Figure 3-2 Restoring Balance

Other cultural practices performed in Cambodia to restore heat in the body following childbirth include the lighting of incense sticks to pray for maternal and infant warmth, breathing steam from the process of boiling various local herbs, and the use of heated stones placed on the abdomen. Traditional practices related to restoring balance that may affect early initiation of breastfeeding and exclusive breastfeeding for the recommended six months minimum include, but are not limited to, the following: roasting, traditional medicine ("hot injections"), and drinking wine and eating spicy food (White, 2002; White, 2004; UNFPA, 2006).

3.18.1 Roasting

Following the traditional practice, many Khmer women roast or lie for periods of time atop a slatted bamboo bed over a wood or charcoal fire to restore heat. On the practice of roasting by women in Cambodia, White (2004) notes, "they roast to heat their *sawsaye*[8] to prevent coldness and blood from clotting inside their uterus; to ensure good skin in their old age, overall health, energy, and well-being; and to prevent joint aches or problems" (White, 2004). Moreover, traditional belief and practice explains that Khmer women should roast for a minimum of 3 days and nights to make sure they get full benefit from the heat. During the period of roasting, breastfeeding initiation is often delayed, limited or nonexistent (White, 2002; White, 2004; UNFPA, 2006).

3.18.2 7 UDGLWLRQDO HGLFLQH ³ + RWQHFWLRQV

In Cambodia, certain traditional medicines are believed to restore the maternal body to its proper temperature and balance following childbirth. For Khmer women who are unable to partake in roasting, for a variety of reasons including lack of money for firewood and/or lack of time, the option to inject 'hot' medicines is now an adapted and accepted traditional practice. Traditional injected medicines are considered hot because of the stinging sensation one encounters when injected. These hot medicines may include vitamin complexes, intravenous fluids, and antibiotics (White, 2004). Unfortunately, in attempt to suit modern times and likely mirror the biomedical model of healing found in Western cultures, the traditional practice of injecting unknown medicines is gravely harmful for both mother and child. In a country where communicable diseases such as

[8] Sawsaye literally means fibers or tubules and serves as a classifying word for strings, threads, and hairs. It also refers to all long, string-like structures in the body including ligaments, nerves, and blood vessels. During the postpartum period, Khmer women are considered to be in an altered stated called "sawsaye kjey". (White, 2004; Headly, Chhor, Kheang, Lim & Chun, 1977).

hepatitis and HIV are prevalent, the widespread reuse of needles for injections makes this practice particularly dangerous.

3.18.3 Wine/Spicy Food

In addition to cultural practices of roasting and the use of traditional medicines to restore balance, drinking wine and eating spicy foods is believed to provide one's body with "internal heat". Rice wine mixed with traditional "hot" Khmer medicines or spicy foods such as ginger and pepper is believed to help increase blood circulation thus generating heat in a similar manner to roasting. For postpartum women, traditional belief explains that certain spicy foods will help increase breastmilk production (UNFPA, 2006). However, because little is known about traditional drink and foods ingested postpartum, this cultural practice may be unsafe for both mother and child. The ingestion of a high spice diet and drinking large amounts of Khmer medicines infused in rice wine may be problematic. Additionally, for breastfeeding mothers a diet rich in fruits and vegetables, protein and vitamin A should be encouraged (White, 2004).

3.19 Sources of Support

In addition to personal and cultural barriers to breastfeeding practice, research indicates that breastfeeding initiation and duration will increase if a mother receives quality ongoing support from partners, friends, health care professionals, and the community (Dennis, 2002; McLeod et al., 2002). Lack of studies from the Khmer Rouge period makes it difficult to assess kinship networks and previous sources of breastfeeding support. In rural Cambodia, where women tend to rely on the advice of trusted family, friends, and village elders, support from the community is paramount in her confidence and ultimate success in breastfeeding. Breastfeeding support programs must be derived

from the community level and seek to include all women, regardless of their financial status. In order to overcome economic barriers, support systems put in place by the Cambodian health care system must be accessible and affordable. Sources of support for breastfeeding mothers must also be able to work within the current context of poverty in Cambodia.

3.20 Poverty

Breastfeeding holds an essential role in reducing the impact of poverty around the world. This is best stated by the executive director of UNICEF, "Breastfeeding is a natural safety net against the worst effects of poverty" (OPHA, 2008). Lack of exclusive breastfeeding in the first six months of life is an important risk factor for infant morbidity and mortality which is only compounded by inappropriate complimentary feeding practices (WHO, 2003). When mothers do not breastfeed they often use a breastmilk substitute such as a commercial infant formula. The WHO's *International Code of Marketing of Breastmilk Substitutes (1981)* attempts to regulate profitable alternatives to breastmilk, however, marketing and distribution companies often get away with not informing consumers about the potential health hazards of unnecessary or improper use of infant formulas (OHPA, 2008).

In addition to the health and nutritional benefits of breastfeeding there is increasing evidence of the cost savings to families and the health system when babies are breastfed (OPHA, 2008; Weimer, 2001). Mothers save by not having to maintain the high costs of breastmilk substitutes. In Cambodia, where many women live below the poverty line, the critical notion of expensive infant formula must be acknowledged in one's decision to initiate breastfeeding. Additionally, the health care system saves with a

reduction in expenditures as a result of fewer hospital admissions for childhood diseases such as otitis media and gastroenteritis (Weimer, 2001). To put these findings in perspective, it was estimated that a minimum of US $3.6 billion could have been saved in 2001 if the national prevalence of exclusive breastfeeding increased to Health Canada's current recommendations (OPHA, 2008; Weimer, 2001). In developing countries like Cambodia, breastfeeding is a cost-effective strategy as it helps to ensure that children develop to their full nutritional potential and reduces the financial burdens placed on the health care system. Less exhaustion on the system through an increase in breastfeeding rates would suggest that health resources and health care personnel would be able to devote more time to urgent pandemics like HIV/AIDS.

3.21 Mother-to-Child Transmission of HIV

Exclusive breastfeeding is the optimal mode of infant feeding for the first six months of life (WHO/UNICEF, 1981). However, with the onset of the global HIV/AIDS epidemic there must be recognition that HIV- infected mothers can transmit HIV to their infants through breastfeeding. According to the WHO, Mother-to-Child transmission of HIV can occur during the second and third trimesters of pregnancy, during delivery, or at any point during breastfeeding (WHO, 2008). The risk through breastfeeding is cumulative; the longer the HIV infected woman breastfeeds, the greater the additional risk of transmission through breast milk (see Table 3-12) (WHO, 2008). While available antiretroviral drugs can reduce the risk of transmission during pregnancy, labour and delivery, current interventions do not prevent transmission through breastfeeding. HIV infected mothers should consider other infant feeding options, including wet-nursing or using donors' milk from a milk bank. Alternative options are especially critical in

developing countries where women do not have access to antiretroviral drugs. Although a plethora of research exists on MTCT, the extent of literature reviewed for the purpose of this study was minimal. Study participants were asked neither their HIV status nor questions relating to the transmission of HIV through breast milk. In developing countries like Cambodia the relative risks of breastfeeding by HIV infected mothers are yet to be clearly established. This poses difficulties for HIV infected mothers who wish to make informed decisions about their health and the health of their children. Further research is urgently needed in Cambodia and a follow up study to this KAP report is both encouraged and recommended by the author.

Table 3-12 Estimated Risk and Timing of MTCT in the Absence of Interventions

Timing	Transmission Rate
During pregnancy	5-10%
During labour and delivery	10-15%
During breastfeeding	5-20%
Overall without breastfeeding	15-25%
Overall with breastfeeding to six months	20-35%
Overall with breastfeeding to 18-24 months	30-45%

(Adapted from De Cock et al. 2000)

3.21.1 Mother-to-Child Transmission of HIV in Cambodia

In Cambodia, the first cases of HIV and AIDS were discovered from blood donor sources in 1991 and 1994 respectively (Kakimoto & Fujita, 2003). According to the 2000 UNAIDS report, although the transmission route of half (46%) of the HIV infections in Cambodia can not be identified, 10.3% were due to heterosexual intercourse and 16.5% were due to mother-to-child transmission (UNAIDS & WHO, 2000). This suggests that mothers, after contracting HIV through heterosexual intercourse, are transmitting HIV to

their children, which may be contributing to the current rapid increase in paediatric AIDS (Kakimoto & Fujita, 2003). Thus, knowledge of one's HIV status and education about transmission is imperative. Among the Cambodian adult population, age 15-49, 10% of women and 15% of men have been tested for HIV at some time. In the province of Krong Kep, the percent distribution of women and men who have ever been tested for HIV and know their results is 5% and 9% respectively (DHS, 2005). It is therefore critical that Cambodian women receive education on HIV prevention and sexual empowerment. Khmer mothers should be offered information, counselling, and HIV testing services during antenatal care.

To prevent the spread of the epidemic, UNICEF joined with the MOH and launched the National Programme for the Prevention of Mother-to-Child Transmission of HIV in Cambodia. The goals of the program are to prevent HIV infections among young women and to prevent of mother-to-child transmission by using antiretroviral drugs (ARVs). Further, educating people in the ways that HIV can be transmitted is critical to reducing MTCT rates of HIV in Cambodia. The DHS 2005 report found that although 87% of women and 84% of men know that HIV can be transmitted by breastfeeding, only one-third of women and about one-fourth of men know that the risk of MTCT can be reduced through the use of certain drugs during pregnancy (DHS, 2005). This may indicate that there is incomplete coverage of MTCT education during prenatal visits in Cambodia (DHS, 2005; WHO, 2004).

3.22 Nutritional Status of Women

A women's nutritional status has twice the importance when she is also a mother. Dietary patterns hold implications for her health as well as the health of her children.

Malnutrition in women results in reduced productivity, an increased susceptibility to infections, and risks of adverse pregnancy outcomes (DHS, 2005). A woman who has poor nutritional status as indicated by a low body mass index (BMI), short stature, anaemia, or other micronutrient deficiencies may have a greater risk of producing lower quality breast milk (DHS, 2005). However, research done in developing countries, where women may be bordering on malnutrition, reveals that a woman's body post delivery will make up for the lack of nutrients in her diet in order to feed her infant (DHS, 2005; Khan, 2004). For example, if a mother's diet is lacking in calories, her body will make up the deficit by drawing on the reserves laid down during pregnancy or before. This means that the milk produced by these mothers will satisfy the nutritional needs of the child (Khan, 2004). Furthermore, a breastfeeding mother does not require special foods in her diet to produce or increase her milk supply. An infants' sucking determines the quantity of milk that is produced (DHS, 2005; Khan, 2004). However, ethically, should malnourished women be encouraged to breastfeed? To what degree does breastfeeding jeopardize the health of undernourished Khmer mothers? Could breastfeeding be a source of concern for these mothers? Further research is needed to examine the effects of breastfeeding by malnourished women before the implementation of breastfeeding support programs in Cambodia.

In Cambodia, the staple diet of mothers consists of foods made from grains (99%), and meat, fish, shellfish, poultry, and eggs (94%) (DHS, 2005). Three out of four women consume fruits and vegetables while 31% consume foods made with oil or fat. Only 6% of Cambodian mothers consume milk or other milk products and in the province of Krong Kep, this number drops to merely 2.2% (n=196) (DHS, 2005). However, it is a

potentially damaging myth that breastfeeding mothers need to drink milk to produce milk as mothers who cannot afford to drink milk may discontinue breastfeeding (Khan, 2004). Research indicates that there is no need to introduce milk into the diet of a breastfeeding mother, especially if she does not like it or it cannot be tolerated (La Leche League, 2003).

Overall, Cambodian women must strive to achieve a balanced diet by eating a variety of foods when possible. Even when nutrients are missing from a women's diet, health promotion programs must encourage and educate Cambodian women about the benefits of exclusive breastfeeding for the recommended six months minimum. Additionally, health care providers must be aware of certain indicators that may point towards malnutrition among Khmer women and act accordingly. In a context of overwhelming poverty, nutritional supplements for mothers may be an important part of a breastfeeding support program and thus further research is needed.

3.23 Height and Weight

Two indicators of adult nutritional status are height and weight. Data from these two indicators is used to derive a measure known as body mass index (BMI). The height of a woman is associated with past socioeconomic status and dietary consumption during childhood and adolescence. A woman's height is used to predict the risk of difficulty in childbirth because small stature is often associated with small pelvis size and thus the potential for obstructed labour and delivery. Further, the risk of giving birth to a low birth weight infant is influenced by the mother's nutritional status (DHS, 2005) In Cambodia, the height at which mothers can be considered at risk normally falls between 140 and 150 centimeters. A cut-off point of 145 cm is used for the 2005 Cambodia DHS. Overall, the

percentage of women who reside in rural Cambodia and fall below 145 cm is 8% compared to 6% of urban women (DHS, 2005). The index used to measure thinness or obesity is known as the body mass index (BMI) and is defined as weight in kilograms divided by height squared in meters (kg/m^2) (source). A cut-off point of 18.5 is used to define thinness or undernutrtion and a BMI of 25 or above usually indicates overweight or obesity (Health Canada, 2005). In Cambodia, twenty percent of women are found to be underweight (BMI less than 18.5). More women have a BMI less than 18.5 in rural areas (21%) than in urban areas (17%). The percentage of overweight or obese women is higher in urban areas (14%) than in rural areas (9%) (DHS, 2005).

In the province of Krong Kep, the percentage of women with height under 145 cm is slightly above the average at 8.4% while the mean body mass index (BMI) is 20.8 (see Table 3-13).

Table 3-13 Height and Body Mass Index of women in Krong Kep Province (DHS, 2005)

Height	**Percent**	
Below 145 cm	8.4%	(n= 397)

Body Mass Index (BMI)	**Percent**	
Normal (18.5-24.9)	69.8%	
Thin (<18.5)	22.6%	
Overweight/Obese (>25.0)	7.6%	
Total	100.0%	(n=371)

3.24 Prevalence of Anaemia

Adequate nutrient intake by mothers has important benefits for both the woman and her children. In general, the consumption of vitamin A and iron rich foods are

especially beneficial for breastfeeding mothers in order to prevent anaemia. Common causes of anaemia include intake of iron, folate or vitamin B12. Iron deficiency anaemia may result in an increased risk of premature delivery, low birth weight, and can be related to a number of adverse pregnancy outcomes and even maternal mortality. Unfortunately, anaemia is critical public health crisis in Cambodia with 47% of women having anaemia (DHS, 2005). Anaemia is also higher among rural than urban women. In the province of Krong Kep, 42% of women have at least one form of anaemia ranging by haemoglobin level from mild (34%) to severe (2%) (n=384) (DHS, 2005).

3.25 Child Health

3.25.1 Birth Weight

A major determinant of infant and child health and mortality is birth weight. When a child has a birth weight less than 2.5 kilograms (5.5 pounds), or children are reported to be 'very small', they are considered to have a higher than average risk of early childhood death (DHS, 2005). However, in many developing countries birth weight is not recorded. In Cambodia, approximately 40% of babies were weighed at birth, which represents a significant increase since the 2000 CDHS when only 17% of babies were reported to have been weighed at birth. Among those recorded birth weights, 8% of babies were classified as having low birth weight (weighed less than 2.5 kilograms). Within the province of Krong Kep rates are slightly higher with 10% of births with a reported birth weight of less than 2.5 kilograms (n= 105) (DHS, 2005). To provide context in a different country, the proportion of low birth weights in Canada was 6% (Statistics Canada, 2000). However, direct comparisons between Canadian national low birth weights and Cambodian national low birth weights cannot readily be made due to

higher incidence of risk factors among Cambodian women and statistics derived from a much smaller sample size.

3.25.2 Immunization

Immunization is a proven tool for controlling and eliminating life threatening diseases in vulnerable populations. In order to reduce rates of infant and child mortality, universal immunization of children against six vaccine-preventable diseases (tuberculosis, diphtheria, whooping cough, tetanus, polio, and measles) is critical. The World Health Organization defines children to be fully vaccinated when they have received a vaccination against measles, a vaccination against tuberculosis (BCG) and three doses each of the DPT and polio vaccines by the age of 12 months (WHO, 2008). In Cambodia, 60% of children were fully vaccinated by 12 months of age[9] and there is no significant difference in vaccination coverage between males and females. This number is primarily due to the success of national immunizations campaigns. However, 8% of children born in Cambodia are never vaccinated. Further, the province of Krong Kep has one of the lowest percentages of children fully vaccinated, only 41%, and an alarming 25% of children in the province having received no vaccinations (DHS, 2005).

3.25.3 Nutritional Status of Children

The nutritional status of Cambodian children is a multifaceted issue with multiple factors contributing to poorly nourished children. A well documented factor likely contributing to poor nutritional status among children is the consequences of alternative feeding before six months of age. As well, the prevalence of malnutrition among children

[9] Information on vaccination coverage was collected in two ways: from vaccination cards and from mothers' verbal reports (DHS, 2005).

in Cambodia increases substantially when weaning from the breast begins at six months of age due to poor feeding practices (DHS, 2005). In 2005, the CDHS collected data on the nutritional status of children under five years of age with the aim of calculating three indices- namely, weight-for-age, height-for-age, and weight-for-height- all of which take age and sex into consideration. Overall, these indices provide information about growth and body composition which is then used to assess nutritional status. When children in developing countries receive inadequate nutrition over a period of time, they are often measured in terms of *Stunting* and *Wasting*. Stunting reflects a failure to receive adequate nutrition over a long period of time or chronic malnutrition. Wasting represents acute malnutrition often as a result of a recent episode of illness or the onset of malnutrition. Children are labelled *Underweight* when they suffer from chronic or acute malnutrition, or a combination of both. A comparison of data from the 2005 CDHS with similarly collected date from the 2000 CDHS shows that there have been some improvements in the nutritional status of children in Cambodia (see Figure 3-3).

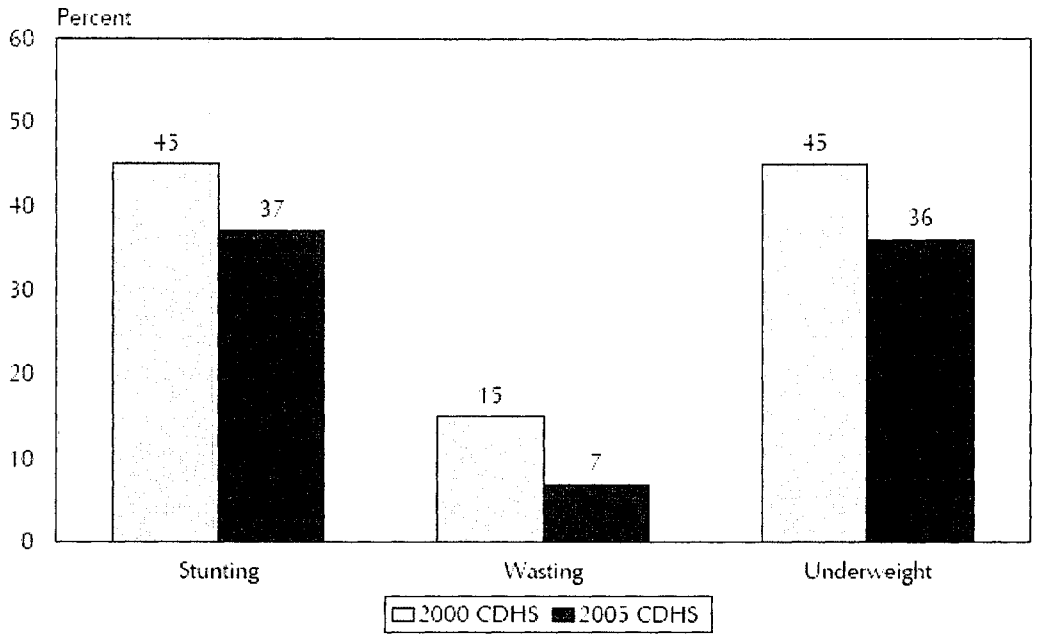

Figure 3-3 Trends in Nutritional Status of Children under Five Years

3.25.4 Diarrhea

Exposure to unhygienic feeding practices and the use of contaminated water often results in dehydration and severe diarrhea. Although the condition can be easily treated with oral rehydration therapy (ORT), severe diarrhea remains a major cause of morbidity and mortality among young children in developing countries. To minimize adverse consequences on the child's nutritional status, mothers are encouraged to continue feeding children with diarrhea and to increase the amount of fluids. In Cambodia, 20% of all children under five have experienced severe diarrhea while 3% have had diarrhea with blood (DHS, 2006). Diarrhea is slightly more common among rural children (20%) in comparison to urban children (16%). Within the rural province of Krong Kep, 11% of children under the age of five have experienced severe diarrhea (DHS, 2005).

3.26 Conclusion

In conclusion this chapter has provided a literature review on important areas of maternal and child health, both globally and in Cambodia. Equipped with culture-specific knowledge one is best able to understand the context and framework for the present research. The next chapter will outline the methodology used by the researcher for the KAP study on breastfeeding practices among women in Krong Kep, Cambodia.

4.0 Methodology

4.1 Introduction

This chapter presents the methodology used by the researcher in formation of the breastfeeding KAP study. The methodology section is derived from previous literature findings on maternal and child health practices specific to Cambodia. This section includes certain design features of the research, including questionnaire development, data collection, potential limitations and the analytic techniques that will be used to interpret findings. The chapter will outline why research on the practice of breastfeeding was needed in Cambodia and specific details such as where, when, and how it was conducted.

4.2 Questionnaire Development

The main objective of the KAP survey development phase was to generate a valid and reliable questionnaire that could be used to collect data about breastfeeding knowledge, attitudes, and practices in Krong Kep, Cambodia. Questions were adapted from a previous survey on maternal and child health by a CIH research assistant and new questions were added to reflect the goals and objectives of this project (Kalaichandran &

Zakus, 2006). Input from thesis supervisors Dr. Lori Chambers and Dr. David Zakus provided feedback about survey content. The questionnaire was tested and refined in Cambodia by Dr. Tung Rathaby, Ministry of Health Cambodia before implementation (see Letter of Recommendation in Khmer by Dr. Tung Rathaby in Appendix C). The final questionnaire was submitted for ethical review and validated by both Lakehead University and the National Ethic Committee for Health Research (NECHR) within the Cambodian Ministry of Health (see NECHR ethics letter of approval in Appendix B). The final questionnaire was sent to an accredited translator, within Cambodia, to be translated into Khmer. See Appendix E for the Knowledge, attitudes, and practices questionnaire on breastfeeding in Kep, Cambodia in English and Khmer. Detailed records were kept for the process of an audit trail.

4.3 Division of Questionnaire

Part A collected descriptive and demographic characteristics including age, home type, educational level, occupation and parity. The type of home (mud, thatch, wood, or brick) was used as a proxy for socioeconomic status, with mud being the lowest status and brick being the highest. Education level was stratified into five layers corresponding to approximate literacy levels. These levels were based on findings that a minimum of 4 years of education are required for most Cambodian women to achieve full literacy as defined by being able to read a simple sentence in Khmer (NHS, 1999). Education levels were defined as: no education (illiterate), 1-3 years (functionally illiterate), 4-6 years (literate, some primary education), 7-11 years (literate, some secondary education), and $\geq$12 years (post secondary education) (Giesbrecht, 2004).

Part B examined maternal health behaviour during pregnancy. The questions focused on pregnancy history in relation to the youngest child only. Questions on antenatal care were asked regarding the stage of pregnancy that antenatal care was received, number of visits, by whom care was given and location of care. Women were also asked questions on the type of birth (vaginal verses caesarean), location of delivery, and possible complications during delivery as possible factors attributed to breastfeeding knowledge, attitudes, and practices.

Part C recorded the subjects' general knowledge regarding breastfeeding. Knowledge related to infant feeding was measured from questions pertaining to how soon after the birth the baby should be put to the breast and for how long a baby should be exclusively breastfed. Additional questions assessing knowledge about the effects of breastfeeding on maternal health were included (Does breastfeeding benefit the health of the mother)? as well as questions used to assess societal transfer of breastfeeding myths (Do women need to drink milk to produce milk)?

Part D assessed attitudes about feeding infants. Questions that evaluated mothers' attitudes included questions on mothers' comfort with breastfeeding, potential problems with breastfeeding and questions on the impact of breastfeeding on care of other family members. Items that tested the community's attitude toward breastfeeding included feeling shy of breastfeeding in public places and whether breastfeeding mothers required a special place to breastfeed in public. A final question was asked regarding subjects' attitudes about use of birth spacing.

Part E documented information on subjects' breastfeeding behaviour and practice. The questions centred on when breastfeeding was initiated and breastfeeding

duration. As well, questions were asked regarding supplementary feeding practices such as sugar water and the use of infant formula.

Part F examined breastfeeding support programs within the province of Kep, Cambodia. Questions evaluated the accessibility and feasibility of parenting/prenatal classes. Further, questions recorded subjects' sense of belonging to the community and willingness to ask for breastfeeding support if needed. A final question (What makes you a good mother)? was included in the refined copy of the questionnaire to assess mothers' overall self-esteem and to provide a conclusion to the questionnaire process that was open-ended and had the potential to build cultural relations.

4.4 Data Collection

Data was collected in June and July 2008, with potential participants being contacted in person during the morning and early afternoon. Interviews were conducted in Khmer and translated into English by a Cambodian woman who worked as a trained midwife and translator. Interviews took place at the villagers' homes and lasted approximately 30 minutes.

Only women with at least one child aged less than 60 months were eligible for participation. All information pertaining to breastfeeding practices was taken in reference to the youngest child only. The questionnaire was administered only after obtaining informed consent (see Appendix D).

4.5 Sample Size

Interviews were conducted in each of the 5 communes in the Municipality of Kep to maximize regional representation. Subjects were randomly selected from each of the 16 villages. The number of randomly selected subjects per village was not proportional to

population size. Overall, 142 interviews were conducted by the researcher and translator. One interview was removed from the data set because of residence location, leaving a total of 141 responses. Among the randomly selected subjects, less than 1 % of the eligible respondents refused to participate in the survey.

4.6 Data Analysis

Using Excel Office 2003, all data was entered into a spreadsheet format. Descriptive statistics were used to organize and summarize the information obtained from a sample (n =141) of the population. Various descriptive measures such as averages and percentages of were calculated. Grouped data tables and graphs and charts were used in this study. Descriptive statistics were completed on both qualitative variables (i.e. type of house) and quantitative variables (i.e. number of children).

Many steps were employed to ensure data trustworthiness. To demonstrate credibility, member checking with the translator was done during and at the end of each interview to ensure that the researcher correctly understood the subject's response. To ensure dependability, detailed information was documented for the purpose of an audit trail. To enhance conformability, data was examined for similarities and differences across the interviews and emerging themes were identified. Lastly, to guarantee transferability, the research process has been documented in detail thus enabling potentially interested parties to determine whether the results are transferable to other settings.

4.7 Uncertainties/ Potential Limitations

Despite all the precautions taken by the researcher, there were a number of noted uncertainties and limitations that may have impacted the present study. The survey was

conducted in Khmer and translated into English by a trained midwife. Due to language barriers some content may have been lost in translation. As a result of this limitation, the author did not use computer software programs made for qualitative research, such as NiVivo, to code and categorize emerging themes for inductive content analysis.

Issues related to internal validity may have affected the data. Communication between subjects, especially in a foreign language that the researcher was unable to understand, may have been a problem. Likewise, close proximity of residences within the rural villages may have lead respondents to find out that there would be a small compensation (hand towel) upon completion of the questionnaire which may have facilitated participants' eagerness to participate in the interview. As well, since results included experiences of mothers from five years ago, respondents may have displayed recall bias if they have not breastfed in five years. Women may also have been biased by maturation (growing older and wiser) and cultural trends that have occurred over the past five years.

Furthermore, although qualitative research is not generalizable, issues related to external validity may have affected the data. Research was conducted in a specific place with certain types of women and within a specific time period. This may limit the degree to which the results can be transferred[10] to other provinces within Cambodia.

4.8 Conclusion

In conclusion, this chapter has described the methodology used by the author for purposes of the KAP study. The section explained how the study was conducted as well

[10] The researcher attempted to enhance transferability by providing a thorough description of the research context. Any person who wishes to 'transfer' the results to a different context is then primarily responsible for making the judgement of how sensible the transfer is and doing the transferring.

as design features of the research including participants, data collection, and the analytical techniques that were used. Moreover, data analysis demonstrated research dependability, conformability, and transferability. Threats to internal validation and potential limitations of research were included. The next chapter will focus on KAP study results.

5.0 Results

5.1 Introduction

The following results were obtained after the administration of the KAP Breastfeeding Questionnaire (see Appendix E). The value of n = 141 unless otherwise specified. Most results are presented using both written and table format. Demographic results, antenatal care history and pregnancy history, attitudinal and interpersonal characteristics and rates of breastfeeding initiation and duration are provided. Further, results regarding problems during breastfeeding, complimentary feeding, and breastfeeding support programs are given. Lastly, qualitative results from the open-ended question, "What makes you a good mother"? have been added to the study.

5.2 Demographics

5.2.1 Place of Residence

Krong Kep Municipality, Cambodia encompasses 16 villages. Subjects meeting the inclusion criteria were randomly selected. The number of subjects chosen per village was not proportional to village size. The largest numbers of respondents were from Chom Kabey village, while the least number were from Ou Doung village (see Table 5-1).

Table 5-1 Place of Residence

Place of Residence	# Respondents
Chom Kabey	17
Phnom Leav	8
Ou Doung	2
Prey Takouy	8
Rhoneas	7
Okrasa	13
Dam Nak Chom Pok	14
Koe Kro Sang	10
Aom Peng	7
Angkoul	10
Toul Sangam	6
Kep	7
Thmei	6
Koh Soam	9
Dam Nak Chong Aeuk	12
Kom Pong Troi Lach	5
TOTAL	**141**

5.2.2 Type of House

For most respondents, type of house was equally divided between Thatch (29.1%), Wood (31.9%), and Brick (29.8%) (see Table 5-2).

Table 5-2 Type of House

Type of House	Frequency	Percent
Mud	2	1.4%
Thatch	41	29.1%
Wood	45	31.9%
Brick	42	29.8%
Tin	11	7.8%
Total	**141**	**100.0%**

5.2.3 Maternal Age

The mean age of the women in the sample was 29.3 years. The oldest woman interviewed was 50 while the youngest was 18, giving a range of 32 years. See Table 5-3 for percentages of women in five age categories.

Table 5-3 Maternal Age

Maternal Age	Frequency	Percent
15-20 years	11	7.8%
21-25	33	23.4%
26-30	55	39.0%
31-40	30	21.3%
>40	12	8.5%
Total	**141**	**100.0%**

5.2.4 Marital Status

Almost all women were married (see Table 5.4).

Table 5-4 Marital Status

Marital Status	Frequency	Percent
Married	139	98.6%
Divorced	2	1.4%
Total	**141**	**100.0**

5.2.5 Years of Marriage

Mean years of marriage for the women in the sample was 9.02, with a range of 1 to 29 years (n = 139).

5.2.6 Maternal and Paternal Education

See Figure 5-1 for percentages of maternal and paternal education in each of five predetermined educational categories. Levels were defined as: no education (illiterate), 1-3 years (functionally illiterate), 4-6 years (literate, some primary education), 7-11 years

(literate, some secondary education), and ≥12 years (post secondary education) (Giesbrecht, 2004).

The mean educational level for a breastfeeding mother was 4.3 years (literate, some primary education). The mean education level for fathers was 5.2 years (literate, some primary education). The percentage of women and men with no education (illiterate) was 15% and 11% respectively. Of those women who have some level of education (62%), not one woman has reached the level of post secondary education.

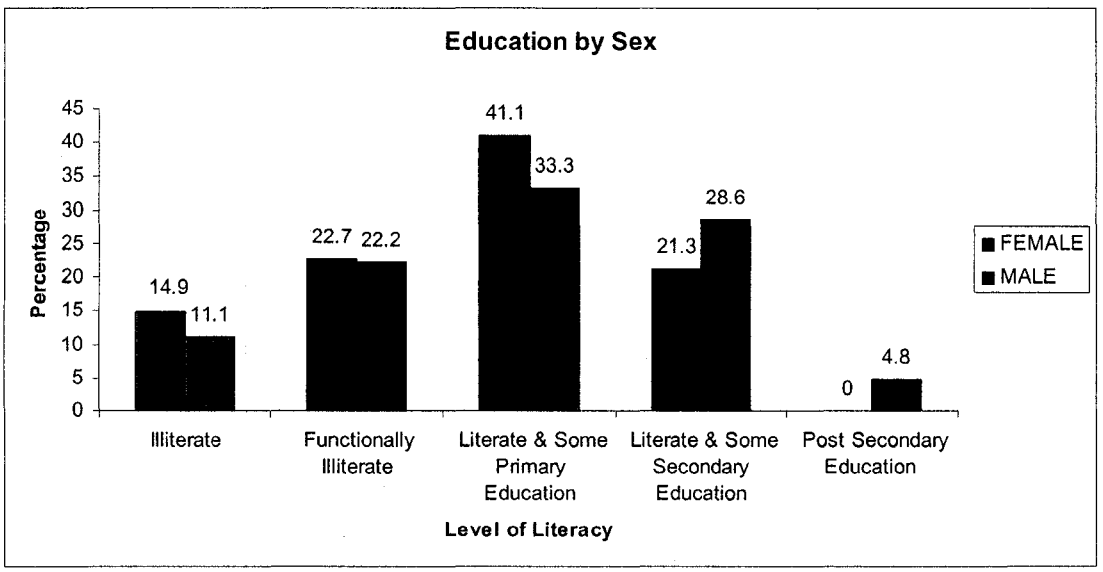

Figure 5-1 Education by Sex

5.2.7 Parity

Mean number of children per woman was 2.87 children. The mean age of the youngest child was 20 months. At the time of the interview a few women were pregnant (see Table 5-5).

The mean number of children per woman increased as maternal age increased (see Table 5-6). In the three largest age groups, the number of women reporting 4-6 children rose from 0% for 21-25 year olds to 13% for 26-30 year olds to 43% for 31-40 year olds.

Table 5-5 Currently Pregnant

Currently Pregnant	Frequency	Percent
Yes	9	6.4%
No	132	93.6%
Total	**141**	**100.0%**

Table 5-6 Parity by Age

Parity by Age	15-20 years		21-25 years		26-30 years		31-40 years		> 40	
1-3 children	11	100.0	33	100.0	48	87.3	13	43.3	0	
4-6	0		0		7	12.7	13	43.3	7	58.3
7-9	0		0		0		4	13.3	2	16.7
> 9	0		0		0		0		3	25.0
Totals	**11**	**100%**	**33**	**100%**	**55**	**100%**	**30**	**100%**	**12**	**100%**

5.2.8 Sex Distribution of Child

All information pertaining to breastfeeding practices was taken in reference to the youngest child only. Sex distribution of the children was not equal. Information was taken in reference to a greater number of male children (59%) than female children (41%) (see Table 5-7).

Table 5-7 Sex Distribution of Child

Sex of Child	Frequency	Percent
Male	83	58.9%
Female	58	41.1%
Total	**141**	**100.0%**

5.2.9 Maternal Rates of Birth Spacing

The majority of married, non-pregnant women (n = 130) were not using birth spacing at the time of the interview. Of the 35 women who reported using birth spacing (27%), the most common types of birth spacing were the pill (43%) and injection (40%).

Table 5-8 Maternal Rates of Birth Spacing

Use of Birth Spacing	Frequency	Percent
Yes	35	26.9%
No	95	73.1%
Total	**130**	**100%**

Table 5-9 Type of Birth Spacing

Birth Spacing Method	Frequency	Percent
Pill	15	42.9%
Injection	14	40%
IUD	2	5.7%
Natural/Monitor Ovulation	2	5.7%
Other (Hysterectomy)	2	5.7%
Total	**35**	**100.0%**

5.3 Antenatal Care and Pregnancy History of Respondents

5.3.1 Antenatal Care Percentage

The majority of women (75%) received some form of antenatal care and advice in the most recent pregnancy and delivery. One quarter of women did not receive any care.

Table 5-10 Antenatal Care Percentage

Antenatal Care	Frequency	Percent
Yes	105	74.5%
No	36	25.5%
Total	**141**	**100.0%**

5.3.2 Antenatal Care: Stage in Pregnancy

Most women in the sample received antenatal care for the first time during the fifth month of pregnancy (30%). Due to translation error, the source of antenatal care could not be computed. Many women cited the location of antenatal care and place of delivery to be the same when this was often not the case. Question 3 from Section B was omitted from the KAP Breastfeeding questionnaire.

Table 5-11 Stage in Pregnancy

(Stage in Pregnancy	Frequency	Percent
One month	3	2.9%
Two	3	2.9%
Three	16	15.2%
Four	12	11.4%
Five	31	29.5%
Six	20	19.0%
Seven	11	10.5%
Eight	5	4.8%
Nine	2	1.9%
Do not know	2	1.9%
Total	**105**	**100.0%**

5.3.3 Pregnancy History: Location of Birth

Most women (60%) gave birth at home (see Table 5-12).

Table 5-12 Location of Birth

Location of Birth	Frequency	Percent
Home	84	59.6%
Private clinic	32	22.7%
Public hospital	19	13.5%
Health centre	4	2.8%
Other (Midwife's house)	2	1.4%
Total	**141**	**100.0%**

5.3.4 Pregnancy History: Assisted Delivery Caregiver

Forty-two percent of women sampled gave birth with a traditional birth attendant (see Table 5-13). The second most common person to assist with delivery was a midwife (36%).

Table 5-13 Assisted Delivery Caregiver

Assisted Delivery Caregiver	Frequency	Percent
Doctor	31	22.0%
Midwife	51	36.2%
TBA (total)	59	41.8%
TBA- trained	42	29.8%
TBA- untrained	17	12.0%
Total	**141**	**100.0%**

5.3.5 Pregnancy History: Type of Birth

Almost all women had a vaginal delivery (see Table 5-14).

Table 5-14 Type of Birth

Type of Birth	Frequency	Percent
Vaginal	139	98.6%
Caesarean	2	1.4%

5.4 Attitudinal and Intrapersonal Characteristics

5.4.1 Maternal Intentions

While there is no way to know what the subjects' intended breastfeeding duration was, or when the decision was made, the data indicates that several of the women did not breastfeed for as long as intended. Ninety-four percent of women sampled believed that they should breastfeed for the recommended 6 months. However, only seventy-one percent of women sampled breastfed for the optional 6 months or longer. Thus,

approximately twenty-three percent or 32 women (n= 139) responded that their expectations were not the same as their breastfeeding experience.

5.4.2 Maternal Confidence

Most respondents were confident with their skills in breastfeeding (see Table 5-15). Approximately 62% felt "very comfortable" in their ability, with less than 20% indicating that they were either "somewhat" or "not comfortable". (Two subject's did not breastfeed thus n= 139).

Table 5-15 Maternal Confidence

Maternal Confidence	Frequency	Percent
Not comfortable	16	11.3%
Somewhat	12	8.5%
Do not know	21	14.9%
Comfortable	3	2.1%
Very	87	61.7%
Total	**139**	**100%**

5.4.3 Intrapersonal Characteristic: Maternal Shyness

Seventy-five percent of women sampled indicated that they were "not shy" to breastfeed in public. One quarter responded they would be shy to breastfeed in public.

5.4.4 Breastfeeding in Public

When asked how essential they believed it was for a woman to have a special place to breastfeed in public places, most respondents felt it was "necessary" (80%). Less than twenty percent of respondents felt it was "unnecessary" to have a special place to breastfeed in public. However, due to translation error, 24 respondents were omitted from Section D, Question 6.

5.5 Breastfeeding Initiation and Duration Rates

5.5.1 Breastfeeding Initiation

Table 5-16 illustrates the frequency of responses within the total group for the dependent variable "breastfeeding initiation". This variable is based on Section E, Question 2 of the KAP Breastfeeding Questionnaire, "when did you initiate breastfeeding after delivery?" The results indicate that 25% of women initiated breastfeeding within the first hour post delivery. In total, approximately 82% of women sampled initiated breastfeeding within the first 24 hours post delivery. However, almost 20% of women waited longer than 24 hours after childbirth to initiate breastfeeding.

Table 5-16 Initiation

Initiation Rate	Frequency	Percent (n =139)
Within 1 hour	34	24.5%
2-24 hours	79	56.8%
> 24 hours	26	18.7%
Did not breastfeed	2	X
Total	**141**	**100.0%**

5.5.2 Breastfeeding Duration

Table 5-17 is intended to determine if the women surveyed practiced exclusive breastfeeding for the recommended and optimal duration of six months post delivery. Results indicate that more than half of women sampled (53%) breastfed exclusively for exactly the recommended six months duration. Seventy-one percent of women breastfed exclusively for six months or longer. Few women (9) who reported exclusive breastfeeding for six months did not initiate breastfeeding within the first 24 hours post delivery.

Table 5-17 Duration

Duration Rate	Frequency	Percent (n =139)
Not exclusive	12	8.6%
Do not know	3	2.2%
< 6 months	25	18.0%
6 months	74	53.2%
> 6 months	25	18.0%
Did not breastfeed	2	X
Total	**141**	**100.0%**

5.6 Problems Encountered during Breastfeeding

Although only 36% of the sample indicated that they had problems with breastfeeding, these women experienced a number of different problems. Problems perceived by the respondents can be separated into two categories: those that originated from the infant and those originating from the mother. "Baby crying", "Baby won't breastfeed" and "Too difficult for Baby" were the problems originating in the infant as reported by the mothers. A larger number of respondents reported difficulties while breastfeeding that directly originated from themselves rather than from the child. These problems included: "not enough milk", "sore nipples", and "time constraints". (Note: "Not enough milk" may be linked to the traditional practice of "Roasting" that will be discussed in Section X).

5.7 Complementary and Supplementary Feeding

Of those women who did not exclusively breastfeed for the recommended 6 months minimum (n =39), many fed their infants boiled sugar water and solids (cake, porridge, and rice). Total exceeds 100% because a number of women gave more than one source.

Table 5-18 Complementary and Supplementary Feeding

Supplementary Item	Frequency	Percent
Boiled water	33	84.6%
Boiled sugar water	27	69.2%
Cow milk	13	33.3%
Canned/ Powder milk	13	33.3%
Solids(cake, rice, porridge)	34	87.2%
Un-boiled water	3	7.7%
Breast milk from another woman	2	5.1%

5.8 Breastfeeding Support Programs Offered to Pregnant and New Mothers

Almost all women (96%) reported that breastfeeding support programs or "mother classes" did not exist in their villages. Of those women who responded that breastfeeding support programs did exist in their village (n =6) all six women reported attending the support programs which may indicate the value of support programs in this community.

5.9 Sense of Belonging to Local Community

The majority of women (88%) stated that they felt a strong sense of belonging to their local community. Twelve percent of women responded that their sense of belonging to their community was not strong.

5.10 Open-Ended Question: What makes you a good mother?

This study sought to understand a community of Khmer women in their natural setting. In order to facilitate contextual understanding of breastfeeding practices in Krong Kep it is best to first understand self perceptions held by the mothers who are undertaking the practice and cultural art of breastfeeding. Thus an additional question was asked by the researcher at the conclusion of the questionnaire: "What makes you a good mother"?

Emerging responses and themes were extracted from the supplementary question. The following provides an overview of common answers until saturation was met (see Figure 5-2).

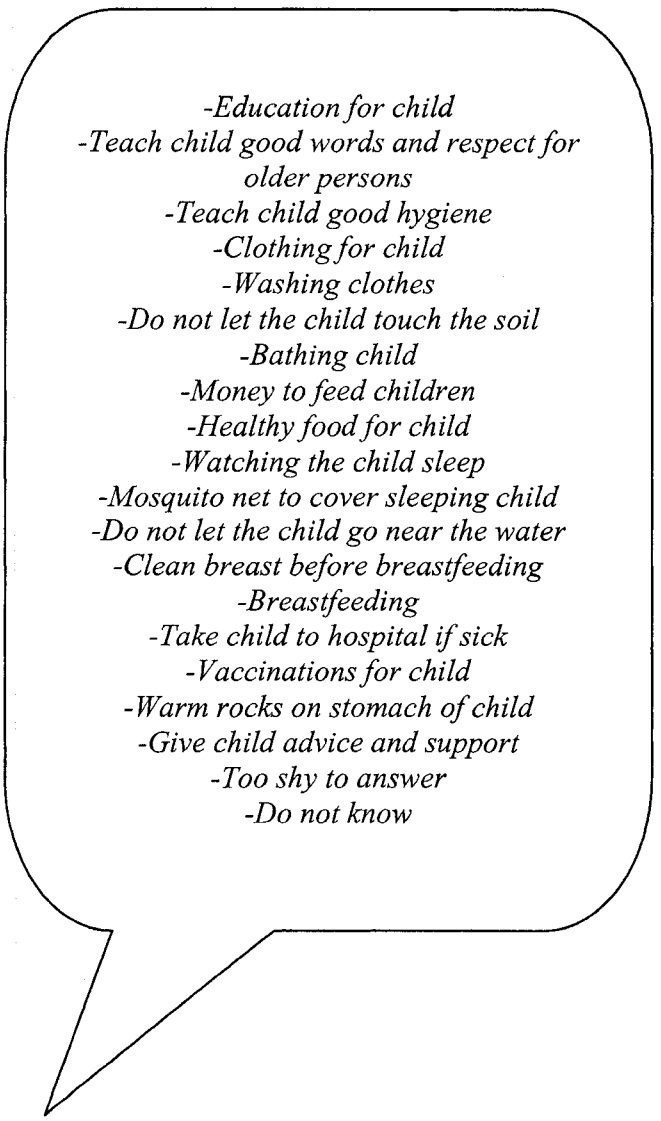

Figure 5-2 Emerging responses and themes from bonus question

5.11 Conclusion

This chapter has provided results from the KAP study. Rates of breastfeeding initiation and duration among study respondents are included in this chapter as well as emerging responses and themes from the open-ended question, "What makes you a good mother"? The following chapter will elaborate on study results and provide in-depth discussion and analysis of research findings.

6.0 Discussion and Interpretation of Findings

6.1 Introduction

This chapter begins by providing the reader with a demographic profile of a breastfeeding woman in Krong Kep, Cambodia. Antenatal care and pregnancy history of respondents are considered as potential factors relating to a woman's decision to initiate and continue breastfeeding for the recommended six months. Participants' knowledge and their attitudes toward breastfeeding are discussed. Further, initiation and exclusive breastfeeding rates in Kep are interpreted and the context of breastfeeding support programs in Krong Kep is addressed. Relevant findings specific to Cambodian culture such as history, gender, and cultural traditions are discussed in their relationship with breastfeeding. Lastly, reasons why Khmer mothers choose to breastfeed and choose not to breastfeed/to discontinue breastfeeding are provided to conclude the chapter.

6.2 Discussion

6.2.1 Part A and Part B

A demographic profile of Khmer women from the sample population provides one with enough information to create a "mental image" of the "average" study

participant from Krong Kep, Cambodia. An illustration of this woman reveals that she is twenty-nine years old and has been married for at least nine years. Together with her husband and their three children, she lives in the family residence made from wood or thatch. She has received some primary education and is considered literate. To support her family, she is employed as a farmer and likely works in the rice paddies.

Demographics from this KAP study are revealed to be similar to statistical results found in the Demographic Health Survey (2005). A comparison of the two studies reveals little change in attributes characteristic of Khmer women from the province of Kep, Cambodia (see Table 6-1). In combination with other information, demographics may provide insight into whether a woman living in Kep will initiate breastfeeding and continue to breastfeed exclusively for the recommended six months minimum.

Table 6-1 Comparison of Demographics from this KAP Study 2008 and the DHS 2005

Demographic	KAP Study (2008)	DHS for Krong Kep (2005)
Parity Rate	2.87 (approx. 3 children)	3.20 (approx. 3 children)
Use of Birth Spacing	26.9%	28.7%
Years of Education	4.3 years	3.5 years
No Education/Illiterate	14.9%	14.3%

Likewise, results regarding antenatal care practices and pregnancy history of respondents in this study provide key findings which may shed light onto potential barriers faced by Cambodian women who wish to initiate and continue exclusive breastfeeding. To begin, most of the respondents (75%) received some form on antenatal care. This suggests that there is a valuable opportunity for breastfeeding promotion and education that must be effectively utilized. Unfortunately, Cambodian women in this

study are waiting too long to seek antenatal care and health advice. Health care professionals recommend that the first antenatal visit occur within the first three months of pregnancy, not during the fifth month of pregnancy as results found to be the case in Kep (DHS, 2005). This finding may indicate that Cambodian women from the province of Kep are starting antenatal care at a relatively late stage in their pregnancy. The effectiveness of the care decreases when ANC is sought late in pregnancy and becomes less beneficial in the prevention of adverse pregnancy outcomes, health promotion, and perhaps breastfeeding counselling and initiation. It is essential to understand why women initiated antenatal care at a later stage in pregnancy than would be optimal and to design interventions that improve access to antenatal care as part of a holistic approach to breastfeeding promotion. It is likely that reasons cited for delayed antenatal care are linked to the wider context of poverty in which Cambodian women are forced to live and thus more research is needed.

Moreover, most women (60%) choose to give birth at home. This finding is slightly lower than the DHS (2005) report which found that 83% of mothers delivered at home. A significant decline in the percentage of deliveries occurring at home in a short period of time may suggest an increase in service utilization, including the growth of the private health sector in Cambodia. Results from the KAP study reflect this idea with 23% of women delivering in a private clinic. This may indicate that cost is an important factor in choice of delivery. Women with higher incomes have more choice and they exercise this choice by delivering at a private clinic while poorer women are limited to delivering at home. Although one choice is not necessarily better than the other, it is imperative that

conditions during delivery are hygienic to reduce the health risks to both mother and child.

Similarly, an important component of decreasing adverse health risks during childbirth is increasing the proportion of babies being delivered under the supervision of a trained health professional. The KAP study found that women were almost equally divided in their provider during delivery with slightly more women using a traditional birth attendant (42%) than midwife (36%). However, it should be noted that for the purpose of this study traditional birth attendants are assumed to have no formal training. This assumption is consistent with definitions of TBA provided in other research (UNFPA, 2006). Some distinctions were made by women during the questionnaire regarding trained verses un-trained TBAs, but these differences were almost always in reference to certain hygienic practices. For example, women in the study often reported that an "un-trained" TBA did not wear gloves during delivery. A relevant study by UNFPA (2006) concluded that Cambodian women use midwives to minimize health risks and TBAs to minimize costs. This information is pertinent to findings by the researcher that suggest assistance during delivery is most common with a midwife and traditional birth attendant in comparison to the use of a private clinic physician in the province of Kep, Cambodia.

This finding may indicate that a women's actual behaviour does not reflect her true preference. Instead her decision to use a TBA for assistance during delivery may be based on her inability to pay for a trained health professional such as a doctor or midwife. If this notion is accepted, the cost of assistance during delivery represents a direct factor influencing a mother's decision to breastfeed her child. However, it is important to

recognize that both types of providers may act as a barrier to the promotion of breastfeeding for different reasons. A midwife may be unavailable for ongoing assistance and focused on the medicalization of childbirth rather than the mother-child relationship. TBAs may not adopt safe practices and may discourage early initiation of breastfeeding because of cultural and traditional practices. Overall, this finding indicates that breastfeeding support offered at birth must be tailored and unique to the person providing assistance during delivery. Indirectly, this finding further suggests that breastfeeding promotion programs will have to overcome significant barriers of cost and accessibility to quality health care.

6.2.2 Part C and Part D

Many different factors can prevent women from initiating and exclusively breastfeeding for the recommended six months. A woman's knowledge and attitude toward breastfeeding prior to delivery may constitute part of these factors. Numerous reports have found that between 50% and 75% of expectant mothers decide how they will feed their infants before or very early in pregnancy (Dennis, 2002; Shields, 2005). While there is no way to know what the subjects' intended breastfeeding duration was, or when the decision was made, data from the KAP study indicates that several of the women did not breastfeed for as long as intended. Specifically, 23% of women responded that their expectations were not the same as their breastfeeding experience. This finding suggests that appropriate interventions and breastfeeding support must occur in a timely manner. In fact, based on this data, one may propose "the earlier the better". Thus, facilitation of breastfeeding education and support should begin during early stages in pregnancy and continue post-delivery. It is hypothesized that as a result of early intervention a mother's

confidence with her skills in breastfeeding is likely to increase. The KAP study found that most women (64%) were confident with their breastfeeding skills despite having been provided with little, if any, formal breastfeeding education. This finding may suggest that breastfeeding support programs should place a significant emphasis on various areas of breastfeeding, including perceived barriers, rather than a program focused solely on breastfeeding techniques.

Moreover, a woman's confidence level may have an impact on her decision to breastfeed in public. Results from the study reveal that 75% of women were "not shy" to breastfeed in public. However, when respondents were asked how essential they believed it was for a women to have a special place in public to breastfeed, most women felt it was "necessary" (80%). Collectively these findings exhibit some contradiction. Alternatively, this inconsistency may indicate that women breastfeed their children in public out of necessity and, if given the choice, would appreciate a safe and hygienic area to breastfeed in public. This may take the form of a designated area in open air markets or a special room in a public building. Breastfeeding friendly accommodations should be equipped with breastfeeding support essentials such as a chair, infant change facilities, and accessible sink with clean water. In Cambodia, special places to breastfeed in public should meet the cultural needs and expectations of the community. Any attempt to establish such an area must take a "bottom-up" approach to implementation to avoid becoming a barrier.

6.2.3 Part E and Part F

Early initiation of breastfeeding is recommended by health care professionals for a number of reasons that benefit both maternal and child health. Results from the KAP

study demonstrate that only 25% of women initiate breastfeeding within the first hour of life as recommended by WHO/UNICEF. This finding is slightly lower than data from the DHS (2005) study which found that 31% of women from Krong Kep started breastfeeding within the first hour of birth. More importantly, the number of women initiating breastfeeding within a 24 hour time period doubles (57%) for a total of 82% of women initiating breastfeeding within one day following delivery. This key finding is encouraging and likely a result of concerted efforts by the Ministry of Health and national media campaigns aimed at creating awareness of breastfeeding "best practices" in Cambodia. Furthermore, results from the KAP study found that almost one-fifth (19%) of women waited longer than 24 hours to initiate breastfeeding after childbirth. Although reasons behind the waiting period cannot be concluded from this study, this result can be considering alarming. This result is especially of concern if this finding indicates that one in five children are being given a prelacteal feed, that is, something other than breastmilk during the first three days of life. Poor environmental conditions across the entire country exacerbate this finding if prelacteal feeds are comprised of contaminated water sources. Prelactal feeds often include un-boiled water or water in combination with other substances which is likely to be harmful on the health of the child. Thus, it is critical that breastfeeding support programs emphasize the importance of early initiation of breastfeeding and reinforce the fact that water is unsafe and not needed for infant survival.

WHO recommends exclusive breastfeeding for an infant's first six months of life (WHO, 1981). Results from the KAP study indicate that more than half of women sampled (53%) breastfeed exclusively for a minimum of six months. This result is

slightly lower than a country-wide statistic which estimates the percentage of children who are exclusively breastfed to be 60% (UNICEF, 2008). It is important to note that KAP study findings could not be compared to the DHS 2005 as data was not provided for the individual region of Krong Kep. Moderately-low rates of exclusive breastfeeding duration, as found by the KAP study, suggest that vast improvement is needed in order to have an effect on decreasing overall rates of child malnutrition, morbidity and mortality. Additionally, few women (9) who reported exclusive breastfeeding for six months did not initiate breastfeeding within the first 24 hours post delivery. Although it cannot be confirmed these children were given a prelacteal feed prior to breastfeeding initiation, this finding may suggest that some women understand exclusive breastfeeding to mean "predominately" breastmilk. Alternatively it may indicate that initiation of breastfeeding is being delayed on purpose for cultural reasons.

Additionally, almost all women (96%) reported that breastfeeding support programs or "mother classes" did not exist in their villages. This finding suggests that educational classes directed at health promotion and supporting breastfeeding mothers simply do not exist in Kep, Cambodia. Limited outreach services likely reflect a lack of health care professionals, unavailable funding, and a general inability by community members to overcome the barriers of poverty. However, the KAP study found that 88% of women felt a strong sense of belonging to their local community. This finding is extremely encouraging and suggests that if given the opportunity, women in the community will work effectively together to change conditions that may be beyond individual control. Thus, if women in the community are committed to working together and using whatever resources they may have to improve the health of community

members, there is a greater likelihood of developing a health promotion program to support breastfeeding mothers.

6.3 Relevant Findings Specific to Cambodian Culture

A variety of findings specific to Cambodian culture emerged as a result of the KAP study. For many of the respondents, cultural themes likely impacted their decision to initiate and continue exclusive breastfeeding for the recommended six months. Although culture-specific questions regarding breastfeeding practices were not included on the questionnaire, open ended questions allowed for additional information to be gathered. Specifically, a woman's response often offered insight and noteworthy information on cultural practices and traditions surrounding maternal and child health in Cambodia. The following culture-specific KAP study findings are relevant to the practice of breastfeeding and can be further sub-divided into areas of history, gender, and tradition.

6.3.1 History

Results from the KAP study must be interpreted and considered in reference to Cambodia's historical background. Vast changes occurred within Cambodian society during the years of Khmer Rouge rule (1975-1979). Under the leadership of Pol Pot, many new values and codes of conduct were implemented in place of religion, tradition, and the family (Ebihara, Mortland, & Ledgerwood, 1994). Women living during the regime were forced to make decisions regarding their children in light of these new implementations. It can thus be argued that decisions made by women living in Cambodia today are rooted in historical values that may have been influenced by the Khmer Rouge regime. This argument is especially important in reference to

demographical findings of KAP study respondents. Mothers participating in the study had a mean age of 29 years with an age range from 18 to 50 years old. This finding suggests that the average respondent was born during the last year of the Khmer Rouge regime and thus can be identified as a "genocide survivor". As a survivor this woman likely grew up having to make profound decisions while Cambodian society set about reconstructing and redefining culture in many different ways (Ebihara, Mortland, & Ledgerwood, 1994). Moreover, the KAP study results found that almost all respondents (99%) were breastfed as infants. Given the average age of 29 years this likely means the respondent was herself breastfed during the final days of the Khmer Rouge regime by a mother who was probably experiencing uncertainty, fear and powerlessness. Unfortunately for the purpose of research there is no data to confirm breastfeeding patterns during the genocide. Therefore one might ask, "What values did mothers who survived the Khmer Rouge regime teach their daughters in regard to infant feeding practices"? Without having asked culture-specific questions it is difficult to understand the extent to which these historical realities influenced study respondents. It is certain that one's history is apt to have had an impact on the decision to initiate and continue breastfeeding by mothers in the KAP study although it is uncertain what kind of influence this might be and thus further research is needed.

6.3.2 Gender

The perception that Khmer culture has been lost, or is being lost, is pervasive among many people in Cambodia (Ebihara, Mortland, & Ledgerwood, 1994). Losses during the Khmer Rouge regime, followed by the presence of the Vietnamese in Cambodia, have led many to believe that the Khmer as a people and culture will soon

cease to exist. Thus, in the face of a threatened loss of their culture, many Cambodian people emphasize certain personality traits as the embodiment of "Khmerness". For women, a particular gender conception that denotes "Khmerness" is the idea of the "perfectly virtuous women". This ideal Khmer woman must know how to keep order in a household including how to cook, wash clothes, and take care of the children. She is generous and obedient and often in Khmer folk tales the virtue of the woman alone is sufficient to bring wealth to the family with no effort (Ledgerwood, 1994). This conception of gender as a system of social order implies a hierarchal system by which Cambodian women are ranked according to their "Khmerness". However, some researchers would suggest these Khmer virtues are "culturally constructed social inequalities" (Collier & Yanagisako, 1987). It is constructed Cambodian social values which likely influenced answers given by respondents during the KAP study questionnaire. This is best exemplified by the responses that were provided when asked, "What makes you a good mother?" Such answers given by mothers include "washing clothes", "bathing children" and "feeding children". Moreover, many women were "too shy" to answer this question or stated that "they did not know". The latter responses are suggestive of the values of "silence" and "humbleness" that are often placed on Khmer women. It is apparent that KAP study respondents have been influenced by gender stereotypes and cultural perceptions of what makes a "good" Khmer mother. Further, cultural perceptions likely influenced choices made by mothers in the study in their decision to initiate and practice exclusive breastfeeding. For example, if a women was told that a "good" mother only breastfeeds her child, she may accept this concept and engage in breastfeeding as the sole method of feeding her child. Societal pressure may

also induce guilt among mothers who are unable to breastfeed their children for various reasons. Overall, cultural views on gender are very powerful in Cambodia and may have the ability to influence and change rates of exclusive breastfeeding and thus nationwide rates of child malnutrition. Fear of the disruption of Khmer culture may also place women under particular pressure to engage in traditional practices that create barriers to breastfeeding.

6.3.3 Tradition

According to an anthropological perspective, concepts of "Cambodian culture" and "Khmer tradition" are cultural constructions or labels placed on certain phenomena (Ebihara, Mortland, & Ledgerwood, 1994). The phenomenon of breastfeeding is linked to several traditional practices in Cambodia and cultural findings emerged from the study. Customary practices of drinking traditional wine immediately following childbirth and roasting were observed by many of the respondents and emerged as important additions to KAP study findings.

Many women in the study reported drinking traditional wines as medicine during the days following childbirth. Traditional medicine is mixed with alcohol and given to a woman to drink in order to increase her "internal heat" which is thought to be lost during childbirth (UNFPA, 2006). Although this study did not ask mothers about their participation in specific traditional practices, a modified question regarding the consumption of alcohol was asked to respondents (Part C-Q6: Did you drink alcohol while breastfeeding?). It is unclear if mothers consider traditional wines to be included as alcohol. The following results from this question suggest that most women (67%) did not engage in the traditional practice of drinking wine following childbirth (see Table 6-2).

Table 6-2 Consumption of Alcohol Following Childbirth

Consumption of Alcohol	Frequency	Percent
Yes	46	32.6%
No	95	67.4%
Total	141	100.0%

For those mothers who acknowledged drinking traditional wine following childbirth and while breastfeeding their infant (33%), it is difficult to determine the amount of alcohol that is being consumed. This finding is of grave concern given the reality that alcohol passes freely into the mother's milk (Mennella & Beauchamp, 1991; Newman, 2005). The effects of alcohol on the breastfeeding infant are directly related to the amount the mother consumes. Excessive amounts of alcohol while breastfeeding may lead to drowsiness, weakness, decreased linear growth and an overall failure to thrive in the infant (Newman, 2005). Thus, one may argue that this traditional and cultural practice is potentially dangerous. However, because little is known about traditional wines consumed during postpartum, specific conclusions cannot be made. More research is needed to determine the amount of alcohol which can be considered safe for breastfeeding mothers in Cambodia who wish to partake in this traditional practice.

A second traditional custom reported throughout the KAP study was the cultural practice of roasting. Roasting is practiced by women in order to increase their "internal heat" that is assumed to be lost during delivery and to slow the aging process (UNFPA, 2006). Although specific questions were not asked regarding this traditional practice, roasting emerged as a prominent theme among respondents. This finding is significant because the practice of roasting may delay the onset of breastfeeding. Mothers who participate in the cultural tradition may delay breastfeeding initiation or be separated from their infants while they roast. Moreover, in a study conduced by UNFPA (2006) it

was found that a quarter of traditional birth attendants advised not breastfeeding for the first few days of life in order to best observe ceremonial practices including roasting. Thus, one may suggest that this traditional and cultural practice is potentially harmful for both mother and child. Certainly heating the body to extreme temperatures is problematic for mothers who may have borderline hypertension or other undiagnosed illnesses. For infants, delay in the onset of breastfeeding may mean that the child misses out on colostrum produced by the mother during the early days of breastfeeding. Colostrum provides an infant with proper nutrition and protects against many different viruses and bacteria. However, because there has been limited literature on the practice of roasting and its effect on breastfeeding, more research is needed to make any specific conclusions about the traditional custom in Cambodia. Further, if negatives health outcomes were found to be associated with roasting, interventions created to adapt the Cambodian custom would need to be designed with cultural sensitivity and respect.

6.4 Interpretation of Findings

According to KAP study results, explanations that suggest whether a women living in Krong Kep Cambodia will initiate breastfeeding and continue exclusive breastfeeding (for the recommended six months minimum) can be found in the research. The following section will summarize explanations and findings from the study in attempt to examine two significant questions: "Why do mothers choose to breastfeed?" and "Why do mothers choose not to breastfeed/discontinue breastfeeding?"

6.4.1 Why Do Mothers Choose to Breastfeed?

Although the choice to breastfeed is a personal decision that involves a combination of many factors which are unique to each mother, the KAP study revealed

common reasons why Cambodian women choose to breastfeed. Mothers in Krong Kep, Cambodia choose to breastfeed because they understand that breastfeeding is the optimal feeding method for their infants and they understand the health benefits for their children. When mothers comprehend that they are able to provide the best food for their children it likely creates a "peace of mind".

Likewise, Khmer mothers choose to breastfeed because they are confident. Despite a lack of formal training and education, Khmer mothers are confident in their breastfeeding skills. High levels of confidence enable these women to have increased control over their decisions and thus improve their health and the health of their children. Similarly, the KAP study revealed that most mothers are not shy to breastfeed in public. Mothers in the study confidently choose to breastfeed in public rather than succumb to feelings of embarrassment that may be imposed from societal values.

Lastly, mothers choose to breastfeed their children when they feel supported and connected. Almost all women in the study reported a strong sense of belonging to their community. The extent to which people are connected to their community has an important and positive effect on aspects of one's mental, physical, and social health. A strong sense of belonging allows mothers living in Kep to influence rather than coerce each other in their practice of breastfeeding.

Overall, mothers in Kep have a positive attitude towards breastfeeding. Their choice to breastfeed is rational and based on their experiences. Most women are making conscious and deliberate choices to provide their children with optimal nutrition. However, the choice to breastfeed is not always easy and several mothers in the study

chose not to breastfeed or to discontinue breastfeeding before the recommend six months duration (McMurray, 2007).

6.4.2 Why Do Mothers Choose Not to Breastfeed/to Discontinue Breastfeeding?

The KAP study found that reasons cited for discontinuing breastfeeding are related to the mother. Cambodian mothers who are older and well educated are more likely to initiate breastfeeding and continue breastfeeding for the recommended six months minimum. This is especially noteworthy as poor mothers are less likely to be educated. Education is thus a key factor in a mother's decision not to breastfeed/ to discontinue breastfeeding.

Furthermore, although there is no way to know what the respondents' intended breastfeeding duration was, or when the decision was made, the data indicates that many women did not breastfeed for as long as intended. If a woman intends to breastfeed for the recommended six months but has a different experience, it is optimal to understand *when* she made the decision not to breastfed/to discontinue breastfeeding. The time at which maternal intentions begin to differ from actual experience is likely a reason why mothers choose not to breastfeed/to discontinue breastfeeding. A further study is needed to explore when expectations held by Cambodian mothers are changed (prior to birth or post delivery?) and why intentions are changed. Together this knowledge of *when* and *why* will assist in promoting timely breastfeeding support interventions. Likewise, numerous women in the study received antenatal care for the first time at a late stage in their pregnancy. This may be another time related issue that is affecting a mother's decision not to breastfed/ discontinue breastfeeding. It is recommended that pregnant women seek antenatal care for the first time in the third month of pregnancy. Therefore,

more research is needed to understand why Cambodian women are delaying antenatal care and whether of not earlier antenatal care would encourage mothers to exclusively breastfeed for the recommended six months.

Moreover, professional breastfeeding support programs do not exist in Krong Kep, Cambodia. Unlike in Canada where almost all women have access to many health promotion programs (Healthy Babies, Healthy Children, La Leche League, prenatal classes, etc.) mothers in Cambodia do not have this luxury. When health services are not offered to pregnant and new mothers, breastfeeding is not promoted and thus enables mothers in their decision not to breastfeed/to discontinue breastfeeding. However, if such educational programs did exist for Cambodian mothers, it would be necessary to examine potential obstacles that Khmer women must overcome in order to participate in these programs. The largest obstacles to participating in health promotion programs would likely be cost and accessibility. Cost of "treatment" and other unpredictable costs are financial barriers that are especially difficult for poor mothers living in rural Cambodia. Distance to travel to get support is a geographic barrier for rural mothers who cannot afford transport costs to reach urban health centres. Poor infrastructure and roads, all of which were destroyed during the Khmer Rouge period, make it especially hard for traveling long distances. Likewise, family responsibilities, which women are reluctant or unable to leave to others while travelling, are other cost and accessibility related issues that must be considered before the implementation of breastfeeding support programs in Krong Kep, Cambodia.

Lastly, the KAP study found that a mother's decision not to breastfeed/to discontinue breastfeeding is largely influenced by the social inequalities in her

environment. The decision not to breastfeed cannot be attributed solely to any one factor yet each contributing factor is greatly compounded by the unfairness of poverty. Accumulation of exposures and experiences that contribute to inequity and poverty make Khmer women vulnerable in their daily lives. Vulnerability also arises from discrimination by others on the basis of gender, a history that has jeopardised their mental health, undermined access to education and to health services, and compounded economic disadvantage. Collectively, these negative experiences influence a mother in her choice not to breastfeed/to discontinue breastfeeding.

In developing countries like Cambodia, women and children are often the least advantaged people in the community due to scarcity of opportunity, education, finances, and access to health care services. In Cambodia, poverty means that mothers have less control over decisions that affect their health and the health of their own families and communities. Cambodian women thus "choose" not to breastfeed/to discontinue breastfeeding when their circumstances do not facilitate any other choice. This leads one to ask, "If a mother must return to work in the rice fields because she needs to support her family and discontinues breastfeeding prior to the recommended six months, is the decision really hers?"

Collectively, issues of poverty in Cambodia significantly impact Khmer mothers in their decision to breastfeed. Extreme poverty is widespread throughout the country, and thus Cambodian women face serious challenges and risks in maternal and infant survival. Greater effort is required by Cambodian government officials to reduce the multiple dimensions of poverty. Issues related to sanitation, clean drinking water, unemployment, education, gender, and problematic issues of poverty connected to

pregnancy and childbirth must be addressed. Breaking the circle of poverty requires an array of simultaneous actions. A single intervention to support impoverished women in their decision to breastfeed is unlikely to be sufficient (United Nations, 2008).

6.5 Personal Learning and Implications for Research[11]

Upon discovering that I have had the fortunate opportunity of conducting research on maternal and child health in Cambodia, the prototypical enquiry arises, "So, what did you learn?" To this question, the answer is not simple. However, above all things, I have learned that the gap between the rich and the poor is unexplainable. Words alone cannot capture the disparities that I have witnessed in Cambodia. Poor mothers in rural Cambodia have surpassed the English word "impoverished" and to this extent, I am not sure that world leaders understand this concept. For if they did understand, I believe they would find it necessary to question the universality of breastfeeding recommendations. Do universal recommendations for breastfeeding initiation and duration make sense?

In attempts to answer this question, a post-research literature search was conducted. Not surprisingly, findings indicate that some health care professionals around the world are questioning the notion of universal recommendations for maternal and child health care practices. This concept is exemplified by O'Mara (1999) when she asks, "What gives medical associations the right to terrorize us with so-called "recommendations" that only undermine our authority as parents? Such "universal

[11] The author has chosen to refrain from commenting on matters related to the transmission of HIV through breastmilk in Cambodia. In a developing world context, researchers are still weighing the relative risks and benefits of breastfeeding for HIV-infected women. In Cambodia, the subject of HIV remains taboo. Thus, health promotion programs must move beyond the taboo and provide Khmer women with all the necessary information and counselling so that they can make informed decisions for their health and the health of their child. Further discussion on the transmission of HIV through breastmilk in Cambodia is needed urgently.

recommendations" that take neither individual circumstances nor personal preferences into account are a one-size-fits-all pediatrics- insulting at best and hurtful at worst". Similarly, an article by Moffat (2002) questions why maternal-child health education is focused almost completely on women carrying sole responsibility for their children's survival. She believes that health education supporting breastfeeding should be based less on a mother's behaviours and more on environmental conditions. In developing countries, she believes a mother's decision to breastfeed is for the most part a product of global conditions of poverty as well as the politics of national and local governments as she states, "We expect these women to keep their children alive and even healthy in environmental conditions that most people living in affluent nations could not even begin to surmount" (Moffat, 2002). Further, Moffat moves beyond questioning whether universal recommendations make sense but asks whether they are even *relevant*?

The questioning process can be quite frustrating and at times discouraging, yet, I have learned that regardless of universal recommendations, culturally relevant breastfeeding support programs are needed in Krong Kep, Cambodia. Health care professionals must enable women to breastfeed despite their conditions and given their cultural and traditional practices. Ethically, public health officials have an obligation to educate Khmer mothers on the benefits and risks of breastfeeding. Having conducted the KAP study, I have learned that there are specific things that could be helpful for future implementation of a breastfeeding support program including:

- Antenatal care must be comprehensive and holistic and sought early in pregnancy
- Public health campaigns to promote breastfeeding must include cultural sensitivity and be conducted without influence from the commercial industry

- Breastfeeding support programs should be conducted as outreach services and must use culturally important reasons for breastfeeding

Furthermore, given this "new" perspective on breastfeeding recommendations, I feel it would be best to ask Khmer women, "For how long do you think Cambodian women should exclusively breastfeed their children?" and "What is the breastfeeding duration that would be best for you?" Ideally, these questions will provide insight into mothers' beliefs regarding breastfeeding duration while respecting their right to make choices that they feel are best for their health and the health of their children.

Likewise, a number of specific questions arose upon completion of the KAP study which I believe would be beneficial for future research on breastfeeding practices in Cambodia. The following questions were identified by the author and are recommended for health care professionals seeking to better understand the knowledge, attitudes, and practices of breastfeeding women in Cambodia.

1. At which stage in pregnancy do you believe a Khmer woman should first seek antenatal care? [1 2 3 4 5 6 7 8 9 month]
2. What barriers exist to receiving early (prior to 3 months) antenatal care?
3. Does birth order effect the use of antenatal care? (ie. If this is your third children, are you less likely to use antenatal care?)
4. If you received antenatal care, did your antenatal care provider discuss the benefits and risks of breastfeeding with you?
5. Would it be beneficial for you to have a lactation consultant visit your home to discuss breastfeeding?
6. Which of the following traditional practices did you observe while breastfeeding?

- Massage
- Roasting
- Avoiding colostrum for the first few days following birth
- Ceremonial or ritual practices
- Abstaining from or eating certain foods
- Hot injections
- Steaming
- Heated stones
- Traditional herbs or medicines

7. Are there cultural practices not mentioned that you observed while breastfeeding?
8. Do you feel pressured to breastfeed from public health advocacy groups or public health campaigns?
9. If yes, do you feel guilty if you do not breastfeed for the recommended six months minimum?
10. If you were unable to breastfeed for health reasons, which safe alternatives to breastfeeding would you consider using?
    - Expressed milk from biological mother
    - Wet nurse
    - Milk bank

In closing, the personal lessons I have learned have likely far out weighed the small benefits I was able to provide study respondents while conducting research in Cambodia. I will be forever grateful to those women who opened their houses and shared with me their personal experiences of breastfeeding. I have learned and believe that

effective breastfeeding programs begin with honest cross-cultural dialogue and a willingness to acknowledge the differences in breastfeeding practices between women around the world

6.6 Conclusion

In conclusion, this chapter has provided a discussion and analysis of KAP study findings. Summarized results were interpreted and personal insight by the author was given in order to encourage and evoke reflection. Reasons were provided as to why Khmer mothers choose to breastfeed and reasons why they may not breastfeed/ discontinue breastfeeding. Taken together, the reasons surrounding breastfeeding practice must be considered seriously and explored further by health care professionals in Cambodia. The next chapter will outline recommendations to increase breastfeeding initiation and duration rates and to support the practice of breastfeeding in Krong Kep, Cambodia.

7.0 Recommendations for Health Planners

The results indicate that 53% of the respondents exclusively breastfeed for exactly the recommended six months. Almost all women (96%) reported that breastfeeding support programs or "mother classes" did not exist in their villages. The findings suggest that current public health breastfeeding education in Cambodia is improving but may not be sufficient to overcome barriers to breastfeeding. Progress has been made but more momentum is required. The following recommendations are intended to strengthen existing health promotion programs and assist any future breastfeeding educational interventions in Krong Kep, Cambodia.

1. Mother's preferences are important in the decision to initiate breastfeeding and continue exclusive breastfeeding for the recommended six months minimum. It is important to identify specific preferences held by Khmer mothers that may impact their decision to breastfeed. The majority of rural Cambodian women prefer to give birth at home with a traditional birth attendant. This decision is rational and based on a woman's perception and experience of the health system in Cambodia. However, providing health services to women living and birthing within rural populations is a unique challenge that must be addressed. It is thus important to explore how home deliveries can encourage and promote breastfeeding while still respecting personal choice and traditional practices. Outreach services that promote breastfeeding are recommended. Such services will allow health care professionals to educate women on the benefits of breastfeeding while attending to them in their homes. Health promotion professionals, specifically lactation consultants, may be needed to accompany traditional birth attendants during the home birthing process to ensure breastfeeding is initiated within one hour following delivery
2. A national shortage of skilled health care personnel in Cambodia is a major obstacle to achieving health related goals. Health care professionals must be trained in breastfeeding skills and ideally all Khmer women should have access to lactation specialists. To offset the lack of health care specialists in Cambodia, incentives may be needed for TBAs to consider crossover training to become midwives. Investing in training subsidies for young women to become midwives and lactation specialists is recommended. There is also the need to strengthen

public expenditure on health to alleviate the burden of health costs on the most vulnerable and impoverished in Cambodia women and children (UNFPA, 2006).

3. Breastfeeding promotion and education programs must be culturally relevant to mothers. Traditional cultural practices remain very strong among Cambodian women, linked to Khmer conceptions of the body and health. Restoring heat and balance in the body, through practices such as roasting, is a tradition that Khmer women want to keep, while accessing the benefits offered by Western biomedical models of health and harm reduction. Attempts to adapt traditions to suit modern circumstances, such as "hot" injections, must be taken seriously and practiced with caution. As White (2002) notes, "any strategies for changing these beliefs or the practices surrounding these beliefs will need to incorporate Khmer views and vocabulary" (White, 2002). Further research is needed to determine which cultural traditions are beneficial and which are potentially harmful practices. The formal health sector must recognize the Khmer cultural values of harmony and balance and design pubic health programs with these concepts in mind. Culturally specific knowledge must guide the development of future breastfeeding promotion programs in Cambodia.

   Likewise, breastfeeding promotion programs in Cambodia must educate women about the potential risks associated with breastfeeding, specifically, the risk factors associated with mother-to-child transmission of HIV through breast milk. Comprehensive and holistic antenatal care and breastfeeding support programs for Khmer mothers must include HIV testing. This will allow HIV-infected mothers to consider their infant feeding options and thus seek to balance the nutritional

benefits of breastfeeding with the risks of transmitting HIV to their infants (WHO, 2004). Educating women on risks to maternal and child health associated with breastfeeding must be included in future breastfeeding promotion programs in Cambodia.

4. Most mothers report having a high level of confidence in their breastfeeding skills and support having a "special place" to breastfeed in public. It is important to designate and increase the number of "breastfeeding-friendly" places in Cambodia. Creating safe and clean environments for mothers will facilitate breastfeeding and increase public awareness. Providing mothers with options for breastfeeding in public will ultimately encourage communities to accept and support mothers making the choice to breastfeed.
5. As an international public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development, and health (WHO, 2003). Cambodian mothers can and should breastfeed. Only under exceptional circumstances can a mother's milk be considered unsuitable for her infant and for only those few situations should a Khmer mother exercise other feeding options. Best alternatives include expressed breast milk from an infant's own mother, breast milk from a healthy wet-nurse or from a human-milk bank (WHO, 2003). Cambodian health officials should have safe alternatives in place for Khmer mothers, specifically those living in rural villages, who cannot breastfeed and infants who cannot, or should not, be breastfed. Moreover, health officials must collaborate with Khmer mothers on safe alternatives, ultimately taking a "bottom-up" approach to maternal and child health in Cambodia.

6. Breastfeeding barriers are imbedded in the impoverished conditions experienced by women in Cambodia. In order to support the breastfeeding practices of Khmer mothers in Krong Kep, multiple dimensions of poverty must be simultaneously addressed including gender disparities in education, women working in vulnerable occupations, widespread communicable diseases, a lack of sanitation facilities, and the many challenges surrounding maternal and child health during pregnancy and delivery. Further, developed countries must continue to address issues of poverty in Cambodia and commit to providing appropriate levels of foreign aid.

7.1 Conclusion

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. It is both a natural act and a learned cultural behaviour. Through the practice of breastfeeding, mothers and children are intimately linked, forming a biological and social unit (WHO, 2003). It is thus within this unit that mothers and infants also share problems of malnutrition and ill-health. Global strategies created to overcome barriers to breastfeeding must concern mothers and children together.

In Cambodia, poor infant feeding practices are a major threat to national development as malnourished mothers and children cannot act as productive and contributing members of society. Global efforts must respect and protect Cambodian women and children honouring their universal right to adequate nutrition. Strategies implemented to promote breastfeeding in Krong Kep, Cambodia must be relevant to Khmer mothers and refrain from becoming "culture blind policies" (McMurray, 2007). Renewed energy and action, through data, research, and evaluation, is needed to protect Khmer mothers and children. KAP study results warrant the implementation of outreach

breastfeeding support programs for mothers in Krong Kep, Cambodia and suggest that programs are implemented with a degree of urgency. As a "global village" we have a social responsibility to acknowledge the poor conditions that underlie barriers to breastfeeding support programs and that create inequalities for Khmer women. But the promotion of breastfeeding through support programs will not work in isolation. Alleviating the poverty of Khmer mothers is essential in the promotion of breastfeeding; poverty in Cambodia must not be forgotten.

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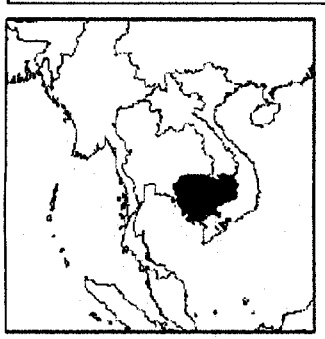
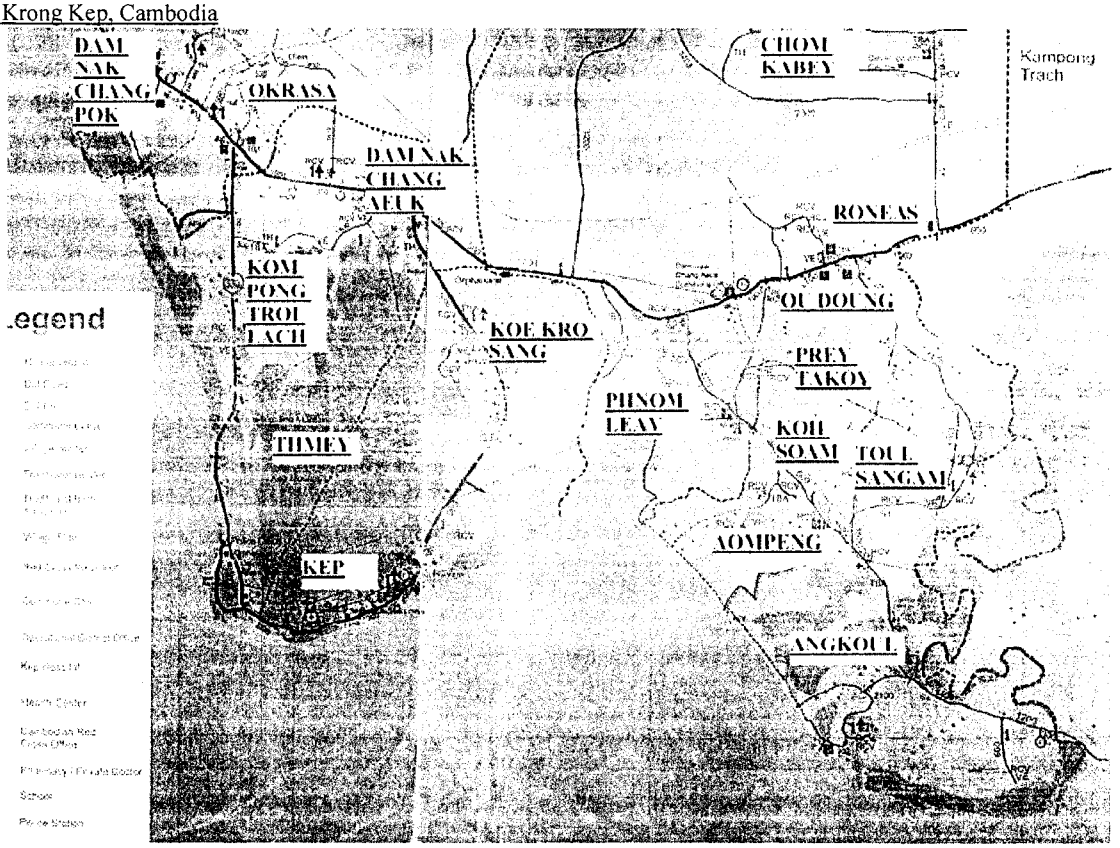
Appendices A: Maps

Map of Cambodia



Map of Krong Kep, Cambodia



Appendix B: Letter of Approval

National Ethic Committee for Health Research: Letter of Approval

ព្រះរាជាណាចក្រកម្ពុជា
KINGDOM OF CAMBODIA
ជាតិ សាសនា ព្រះមហាក្សត្រ
NATION RELIGION KING

ក្រសួងសុខាភិបាល
MINISTRY OF HEALTH
គណៈកម្មាធិការជំនាញក្រមសីលធម៌
សំរាប់ការស្រាវជ្រាវសុខភាពលើមនុស្ស
National Ethics Committee for Health Research

លេខ...026.NECHR...

ភ្នំពេញ, ថ្ងៃទី..06.. ..06.. ឆ្នាំ2008...

Ms. Hilary Wren

Project : Knowledge, attitude, and practice ofbreastfeeding in Krang Kep Municipality, Cambodia.

Reference: June 06th, 2008 NECHR meeting minute

Dear Ms. Hilary Wren

I am pleased to notify you your project entitled "Knowledge, attitude, and practice of breastfeeding in Kreng Kep Municipality, Cambodia " has been approved by National Ethic Committee for Health Research (NECHR) in the meeting on June 06th, 2008. This approval is valid for twelve months after the approval date.

The Principal Investigator ofthe project shall submit following document to the committee's secretariat at the National Institute of Public Health at #2 Kim Il Sung Blvd, Khan Tuol Kok, Phnom Penh. (Tel: 855-23-880345, Fax: 855-23-881949):

- Annual progress report
- Final scientific report
- Patient/participant feedback (if any)
- Analyzing serious adverse events report (if applicable)

The Principal Investigator should be aware that there might be site monitoring visits at any time from NECHR team during the project implementation and should provide full cooperation to the team.

Regards,

Chairman

H.E. Prof. ENG HUOT

Appendix C: Letter of Recommendation

Letter of Recommendation from Dr. Tung Rathaby, Deputy Director of NMCHC and National Reproductive Health Manager, Phnom Penh, Cambodia

ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ - សាសនា - ព្រះមហាក្សត្រ

កម្មវិធីជាតិសុខភាពបន្តពូជ

លេខ: 58/08 កជសបព

ប្រធានកម្មវិធីជាតិសុខភាពបន្តពូជ

សូមគោរពជូន

ឯកឧត្តមប្រធានគណៈកម្មាធិការជាតិប្រឹក្សាសីលធម៌

សំរាប់ការស្រាវជ្រាវសុខភាពដែលទាក់ទងនឹងមនុស្ស

កម្មវត្ថុ: ការពិនិត្យលើគំរោងសិក្សារបស់ Ms.Hilary Wren

ន័យដូចបានជំរាបក្នុងកម្មវត្ថុខាងលើ នាងខ្ញុំសូមជំរាបជូនឯកឧត្តមថា នាងខ្ញុំបានពិនិត្យនិងកែសំរួលលើគំរោងសំណើរនៃការសិក្សាឈ្មោះថា: ចំណេះដឹង ឥរិយាបថ និង ការអនុវត្តការបំបៅកូនដោយទឹកដោះម្តាយ នៅក្នុងក្រុងកែប **(Knowledge, Attitude and Practice of Breastfeeding in Kep Municipality)** របស់ **Ms.Hilary Wren** រួចហើយ។

អាស្រ័យហេតុនេះ សូមឯកឧត្តមមេត្តាពិនិត្យសម្រេចតាមការគួរ។

សូមឯកឧត្តមទទួលនូវក្តីគោរពដ៏ខ្ពង់ខ្ពស់ពីនាងខ្ញុំ។

ធ្វើនៅភ្នំពេញ ថ្ងៃទី22ខែ ៤ ឆ្នាំ ២០០៨

ហត្ថលេខា

វេជ្ជ.ទុង-រដ្ឋាប៊ី

មជ្ឈមណ្ឌលជាតិគាំពារមាតានិងទារក លេខ ៣១A, ផ្លូវលេខ ៤៧ (ផ្លូវតាវាំង) សង្កាត់ស្រះចក ខណ្ឌដូនពេញ ភ្នំពេញ កម្ពុជា

Tel +855 (023) 427300 Fax: +855 (023) 430142 E-Mail: online.com.kh

Appendix D: Letters of Consent

Consent Letter in English

CENTRE FOR INTERNATIONAL HEALTH
UNIVERSITY OF TORONTO
Department of Public Health Sciences
Faculty of Medicine
155 College Street, 7th floor
Toronto, Ontario, Canada
M5T 3M6
hwren@lakeheadu.ca

Knowledge, attitude, and practice of breastfeeding in Krong Kep Municipality, Cambodia

Hilary Wren, MPH Student

Dr. Lori Chambers, Lakehead University Supervisor

INFORMED CONSENT STATEMENT

You are being asked to participate in our study on breastfeeding. We are investigating this topic in order to further our understanding of breastfeeding. Your participation in the research study is voluntary. Before agreeing to be part of this study, please read and/or listen to the following information carefully. Feel free to ask questions if you do not understand something.

If you participate in this study, you will be asked to answer some questions about your knowledge, attitudes, and practices of breastfeeding. This should take less than an hour of your time

There is a possibility that some of the questions in the interviews may make you feel uncomfortable. We will be asking you about personal things and you may feel embarrassed at times. This rarely happens, but if you do feel uncomfortable, you can choose not to answer certain questions, you can take a break and continue later, or you can choose to stop the interview.

This study was not designed to benefit you directly, however, there is some possibility that you may learn more about breastfeeding through your participation. In addition, what we learn from the study may help us, and the Cambodian Ministry of Health, to better understand breastfeeding practices in your community.

Any and all information obtained from you during the study will be confidential. Your privacy will be protected at all times. You will not be identified individually in any way as a result of your participation in this research. The data collected however, may be used as part of publications and papers related to breastfeeding.

Your participation in this study is entirely voluntary. You may refuse to participate in this research. Such refusal will not have any negative consequences for you. If you begin to participate in the research, you may at any time, for any reason, discontinue your participation without any negative consequences.

Please feel free to ask any questions about anything that seems unclear to you and to consider this research and consent form carefully before you sign.

Authorization: I have read or listened to the above information and I have decided that I will participate in the project described above. The researcher has explained the study to me and answered my questions. I know what will be asked of me. I understand that the purpose of the study is to learn more about breastfeeding practices in my community. If I don't participate, there will be no penalty or loss of rights. I can stop participating at any time, even after I have started.

I agree to participate in the study. My signature below also indicates that I have received a copy of this consent form.

Participant's signature _____

Name (please print) _____

Date _____

If you have further questions about this research project, please contact the principal investigator, Hilary Wren (Email): hwren@lakeheadu.ca or faculty supervisor, Rebecca Draisey, at (Tel) 092-547-228, (Email): rdraisey@sympatico.ca. If you have questions about your rights as a research participant or if you have a research related complaint please contact: David Zakus at 416-978-1458, davidzakus@cs.com.

Consent Letter in Khmer

សាកលវិទ្យាល័យ Toronto

ផ្នែកវិទ្យាសាស្ត្រសុខភាពសាធារណៈ

មហាវិទ្យាល័យទេជ្ជសាស្ត្រ

155 College Street, 7th floor
Toronto, Ontario, Canada
M3T 3M6
hwren@lakeheadu.ca

ចំណេះដឹង ឥរិយាបថ និងការអនុវត្តន៍របស់មាតា ស្តីអំពីការបំបៅកូនដោយទឹកដោះម្តាយ នៅក្នុងស្រុកកែប ប្រទេសកម្ពុជា

Hilary Wren, MPH Student
Dr. Lori Chambers) Lakehead University Supervisor

កិច្ចសន្យា

អ្នកកំពុងតែត្រូវបានសុំអោយចូលរួមក្នុងការសិក្សាអំពី *ការបំបៅកូនដោយទឹកដោះម្តាយ* របស់ពួកយើង ។ ពួកយើងកំពុងធ្វើការស្ទើបអង្កេតដើម្បីស្វែងយល់បន្ថែមអំពី *ការបំបៅកូនដោយទឹកដោះម្តាយ* ។ ការចូលរួមរបស់អ្នកក្នុងការសិក្សាស្រាវជ្រាវនេះ គឺជាការស្ម័គ្រចិត្ត ។ មុននឹងចូលរួមក្នុង ការសិក្សានេះ សូមអ្នកអាន និង/ស្តាប់នូវពត៌មានខាងក្រោមយ៉ាងចិត្តទុកដាក់បំផុត ។ ប្រសិនបើអ្នកមិនយល់ច្រង់ចំណុចណាមួយ អ្នកអាចសួរបានដោយសេរី ។

ប្រសិនបើអ្នកចូលរួមក្នុងការសិក្សានេះ អ្នកនឹងត្រូវបានសុំអោយឆ្លើយសំនួរទាក់ទងនឹងចំណេះដឹង ឥរិយាបថ និងការអនុវត្តន៍របស់មាតា ស្តីអំពីការបំបៅកូនដោយទឹកដោះម្តាយ ។ ការសួរសំណួរនេះអាចប្រើរយៈពេលតិចជាង ១ ម៉ោង ។

វាអាចមានសំណួរក្នុងការសម្ភាសន៍ខ្លះ ធ្វើរោយអ្នកមានអារម្មណ៍មិនល្អ ។ យើងនឹងសួរពីរឿងរ៉ាវផ្ទាល់ខ្លួនរបស់អ្នក ហើយអ្នកអាចនឹងមានអារម្មណ៍ខ្មាស់អៀនខ្លះនៅពេលនោះ ។ ទោះជាយ៉ាងណា វាក៏នឹងកើតមានណាស់ ប្រសិនបើអ្នកមានអារម្មណ៍មិនល្អ អ្នកអាចជ្រើសរើសមិនឆ្លើយសំណួរនោះក៏បាន អ្នកអាចសំរាកសិន រួចចាំបន្តទៀត ឬអ្នកអាចបញ្ឈប់ការសម្ភាសន៍នេះតែម្តងក៏បាន ។

ការសិក្សាមិនត្រូវបានបង្កើតឡើងដើម្បីផ្តល់ផលប្រយោជន៍ដល់អ្នកដោយផ្ទាល់នោះទេ តែអ្នកអាចសិក្សាបន្ថែមពី *ការបំបៅកូនដោយទឹកដោះម្តាយ* តាមរយៈការចូលរួមរបស់អ្នក ។ លើសពីនេះទៅទៀត អ្វីដែលពួកយើងរៀន ពីការសិក្សានេះ អាចជួយពួកយើង និងក្រសួងសុខភិបាលកម្ពុជា អោយយល់កាន់តែច្បាស់អំពី *ការបំបៅកូនដោយទឹកដោះម្តាយ* នៅក្នុងសហគមន៍របស់អ្នក ។

រាល់ពត៌មានដែលយើងទទួលបានពីអ្នកនៅក្នុងពេលសម្ភាសន៍ នឹងត្រូវរក្សាជាការសម្ងាត់ ។ ឯកជនភាពរបស់អ្នក នឹងត្រូវបានការពារគ្រប់ពេល ។ អ្នកនឹងមិនត្រូវតែធ្វើអត្តសញ្ញាណកម្មជាលក្ខណៈបុគ្គលតាមរបៀបណា

បានប្រើគ្រាស់ជាផ្នែកមួយនៃការបោះពុម្ពផ្សាយ និងធ្វើជាឯកសារយោងក្រដាសទាក់ទង *ការប៉ាន់ស្មានដោយមិនដោះស្រាយ* ។

ការចូលរួមរបស់អ្នកក្នុងការសិក្សានេះ គឺមានលក្ខណៈជាការស្ម័គ្រចិត្តទាំងស្រុង ។ អ្នកអាចបដិសេធមិនចូលរួមការស្រាវជ្រាវនេះបាន ។ ការបដិសេធមិនចូលរួមរបស់អ្នកនេះ នឹងមិនធ្វើអោយមានផលវិបាកជាអវិជ្ជមានដល់អ្នកទេ ។ ប្រសិនបើអ្នកចាប់ផ្តើមចូលរួមក្នុងការស្រាវជ្រាវនេះ អ្នកអាចចូលរួមនៅពេលណាក៏បានដោយមានហេតុផលខ្លះ អ្នកអាចមិនបន្តចូលរួមដោយមិនផលវិបាកអ្វីឡើយ ។

សូមសួរសំណួរអំពីអ្វីដែលអ្នកមិនចាន់ច្បាស់ ក្នុងការពិចារណាលើការស្រាវជ្រាវនេះអោយបានច្បាស់លាស់មុននឹងអ្នកចុះហត្ថលេខាលើកិច្ចសន្យានេះ ។

ការផ្តល់សិទ្ធិ : ខ្ញុំបានអាន និងស្តាប់ពត៌មានខាងលើបានច្បាស់ហើយ ហើយខ្ញុំបានសំរេចចិត្តថា ខ្ញុំនឹងចូលរួមក្នុងគម្រោងដែលបានរៀបរាប់ខាងលើនេះ ។ អ្នកស្រាវជ្រាវបានពន្យល់ខ្ញុំយ៉ាងច្បាស់ពីការសិក្សារបស់គាត់ ហើយគាត់បានឆ្លើយសំនួររបស់ខ្ញុំ ។ ខ្ញុំដឹងពីអ្វីដែលគាត់នឹងសួរខ្ញុំ ។ ខ្ញុំយល់ថា គោលបំណងនៃការសិក្សានេះ នឹងធ្វើអោយខ្ញុំសិក្សាបានច្រើនបន្ថែមទៀតអំពី *ការប៉ាន់ស្មានដោយមិនដោះស្រាយ* នៅក្នុងសហគមន៍របស់ខ្ញុំ ។ ប្រសិនបើខ្ញុំមិនចូលរួម ក៏គ្មានការដាក់ទោស **ឬបាត់បង់សិទ្ធិអ្វីដែរ** ។ **ខ្ញុំអាចបញ្ឈប់ការចូលរួមរបស់ខ្ញុំក្នុងការសិក្សាស្រាវជ្រាវនេះ** នៅពេលណាមួយក៏បាន ទោះបីបានខ្ញុំបានចាប់ផ្តើមហើយក៏ដោយ ។

ខ្ញុំយល់ព្រមចូលរួមក្នុងការសិក្សានេះ ហត្ថលេខារបស់ខ្ញុំខាងក្រោមនេះ បញ្ជាក់ថាខ្ញុំបានទទួលយកច្បាប់ចម្លងនៃកិច្ចសន្យានេះដែរ ។

ហត្ថលេខាសិក្ខាកាមចូលរួម: _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

ឈ្មោះ (ជាអក្សរពុម្ព) _____

កាលបរិច្ឆេទ : _ _ _ _ _ _ _ _ _ _ _ _ _ _ _

ប្រសិនបើអ្នកមានសំណួរបន្ថែមអំពីតំរោងស្រាវជ្រាវនេះ សូមទាក់មកអ្នកអង្កេតការណ៍ Hilary Wren អ៊ីមែល: **hwren@lakeheadu.ca** ឬទាក់ទងទៅអ្នកត្រួតពិនិត្យ **Rebecca Draisey** តាមទូរស័ទលេខ 0-92 **547-228** អ៊ីមែល: **rdraisey@sympatico.ca** ។ បើអ្នកចង់សួរអំពីសិទ្ធិរបស់អ្នកជាសិក្ខាកាមស្រាវជ្រាវឬប្រសិនបើ អ្នកមានស្រាវជ្រាវណាមួយទាក់ទងនឹងការតវ៉ាដំទាស់ សូមទាក់ទងមក David Zakus តាមទូរស័ព្ទលេខ **416-978-1458** អ៊ីមែល: **davidzakus@cs.com** ។

Appendix E: Questionnaires

Questionnaire in English

Part A: Demographics

1. What village do you live in? _____

2. What type of house do you live in? Mud Thatch Wood Brick

3. How old are you? _____

4. What is your marital status? Married Divorced/Separated Widowed Single

5. If married, how long have you been married? _____

6. If married, has your husband ever been to school? Yes/No

7. If yes, for how many years did he attend? _____

8. Have you ever been to school? Yes/No

9. If yes, for how many years did you attend? _____

10. Are you employed? Yes/No Occupation_____

11. How many children do you have? _____

12. What is the age of your youngest child? _____

13. What is the sex of your youngest child? Male/Female

Part B: Pregnancy History

1. During your last pregnancy, did you receive pre-pregnancy care? Yes/No

2. If yes, from whom did you receive care for your health in pregnancy and delivery?
Midwife Public hospital staff Private medical practitioner Family/Friends

3. During your last pregnancy, did you visit the district health centre or hospital for a pregnancy check-up? Health Centre Hospital Did not visit

4. If yes, at what stages in pregnancy? 1 2 3 4 5 6 7 8 9 (months)

5. Where did you give birth to your youngest child?
Home District Health Centre Public Hospital Private Clinc

6. What type of birth? Vaginal Cesarean section

7. Did you have any problems with your delivery? Yes/No Specify_____

Part C: Breastfeeding Knowledge

1. How long after birth should the baby be put to the breast? _____

2. For how long should a baby be breastfeed exclusively? _____

3. Does formula feeding provide the same nutritional benefits as breastfeeding? Yes/No

4. Does breastfeeding benefit the health of the mother? Yes/No

5. If Yes, how is it helpfull? _____

6. Can breastfeeding mothers drink alcohol? Yes/No Smoke? Yes/No

7. Do women need to drink milk to produce milk? Yes/No

8. Did your mother breastfeed you? Yes/No

Part D: Breastfeeding Attitude

1. Do you believe that women should breastfeed exclusively for the first six months? Yes/No

2. If No, what do you believe a baby should be fed in the first six months? _____ (if water, specify if boiled)

3. What are the problem(s) with breastfeeding? Circle all that apply:
Baby crying Jaundice Dehydrated Baby too sleepy Latching problems
Emotional difficulty Weight loss in baby Other _____

4. Do you think that breastfeeding affects the care of other family members? Yes/No

5. Are you shy to breastfeed in public? Yes/No

6. Do you feel that it is important for mothers who breastfeeding to have a special place in public places? Yes/No

7. Do you use birth spacing? Yes/No

8. If yes, which type? Pill Injection Condom Other _____

Part E: Breastfeeding Behaviour

1. Did you breastfeed your youngest child? Yes/No

2. If yes, when did you initiate breastfeeding after delivery?
Within 1hr Within 24 hours Within 1 week

3. On average, how many hours a day did you breastfeed for?
1 2 3 4 5 6 7 more than 7 hours

4. Did you feed your baby other things besides breast milk before 6 months? Yes/No

5. If yes, circle all that apply:
Fresh cow's milk Canned cow's milk Boiled sugar water Boiled water
Non-boiled water Honey Porridge Infant formula Other _____

6. How comfortable are you with your breastfeeding skills?
Not comfortable/Somewhat comfortable/Don't know/Comfortable/Very comfortable

7. Do you need help with your breastfeeding skills? Yes/No

8. Are you still breastfeeding now? Yes/No

9. What is the main reason you stopped? Circle all that apply:
Not enough milk Fatigue Difficulty with breastfeeding techniques
Sore nipples Illness Planned to stop at this time Chid weaned himself/herself
Advice of doctor Advice of partner Formula feeding preferable Lack of support
Other _____

Part F: Breastfeeding Support Programs

1. Are pre-natal/"mother" classes available close to where you live? Yes/No

2. If yes, did you use these programs with your most recent birth? Yes/No

3. If yes, do you feel there are any challenges for your participation in them? Yes/No

4. If Yes, circle all that apply:
Don't need it Need more information Don't like the program Cost Transportation
Inconvenient Location Lack of child care Other _____

5. How would you describe your sense of belonging to your local community?
Very weak/ Somewhat weak/ Not sure/ Somewhat strong/ Very Strong

6. Do you know where to go for breastfeeding support in your community if you need it?
Yes/No

* What makes you a good mother?

Questionnaire in Khmer

ផ្នែក A : សំណួរប្រជាសាស្ត្រ

១- តើអ្នករស់នៅក្នុងភូមិអ្វី ?_____

២- តើផ្ទះដែលអ្នកកំពុងរស់នៅជាផ្ទះប្រភេទអ្វី ? ផ្ទះបិតដី ផ្ទះប្រក់ស្បូវ ផ្ទះឈើ ផ្ទះថ្ម

៣- តើអ្នកមានអាយុប៉ុន្មាន ? _____

៤- តើអ្នកស្ថិតនៅស្ថានគ្រួសារណាមួយ ? រៀបការរួច លែងលះ ពោះម៉ាយ

៥- បើរៀបការហើយ តើអ្នករៀបការបានយូរប៉ុណ្ណាហើយ ? _

៦- បើរៀបការហើយ តើប្តីរបស់អ្នកធ្លាប់បានចូលសាលារៀនទេ ? *ធ្លាប់/មិនធ្លាប់*

៧- បើធ្លាប់ តើគាត់ចូលសាលារៀនបានប៉ុន្មានឆ្នាំ ? _

៨- តើអ្នកធ្លាប់បានចូលរៀនទេ ? *ធ្លាប់/មិនធ្លាប់*

៩- បើធ្លាប់ តើអ្នកចូលសាលារៀនបានប៉ុន្មានឆ្នាំ ? _

១០- តើអ្នកមានការងារធ្វើទេ ? *មាន/មិនមាន* **មុខរបរ:**_ _ _ _ _

១១- តើអ្នកមានកូនប៉ុន្មាននាក់ ? _____

១២- តើកូនពៅរបស់អ្នកមានអាយុប៉ុន្មានឆ្នាំ ? _____

១៣- តើកូនពៅរបស់អ្នកស្រី ឬប្រុស ?

ផ្នែក B : ប្រវត្តិមានផ្ទៃពោះ

១- ក្នុងអំឡុងពេលមានផ្ទៃពោះចុងក្រោយរបស់អ្នក តើអ្នកបានទទួលការចែចាំមុនកំណើតដែរឬទេ ? *បាន/មិនបាន*

២- បើបាន តើអ្នកបានទទួលការចែចាំសុខភាពពេលមានផ្ទៃពោះ និងពេលប្រសូត្រ ពីអ្នកណា?

អ្នក សាធារណៈ ពេទ្យឯកជន គ្រួសារ/មិត្តភក្តិ

៣- ក្នុងអំឡុងពេលមានផ្ទៃពោះចុងក្រោយរបស់អ្នក តើអ្នកបានទៅមណ្ឌលសុខភាព ឬមន្ទីរពេទ្យ ដើម្បីពិនិត្យផ្ទៃពោះដែរ ឬទេ?

មណ្ឌលសុខភាព មន្ទីរពេទ្យ មិនបានទៅ

៤- បើបានទៅ តើអ្នកទៅនៅក្នុងដំណាក់កាលណា ? *១ ២ ៣ ៤ ៥ ៦ ៧ ៨ ៩ (ខែ)*

៥- តើអ្នកប្រសូត្រកូនពៅរបស់អ្នកនៅទីណា ?

ផ្ទះ មណ្ឌលសុខភាព មន្ទីរពេទ្យ គ្លីនិកឯកជន

៦- ជាកំណើតប្រភេទអ្វី ? *ធម្មតា ដោយវះកាត់*

៧- តើអ្នកមានបញ្ហាអ្វីទេ នៅពេលប្រសូត្រ ? *មាន/មិនមាន* **ចូរបញ្ជាក់ :**_ _ _ _ _

ផ្នែក C: ចំណេះដឹងទាក់ទងនឹងការបំបៅកូនដោយទឹកដោះម្តាយ

១- បន្ទាប់ពីប្រសូត្រកូនចៅរយៈពេលប៉ុន្មានទើបដាក់ទារកទៅរកដោះ ?

២- ត្រូវឱ្យទារកបៅតែទឹកដោះម្តាយមួយមុខគត់រយៈពេលប៉ុន្មាន ?

៣- តើរបៀបផ្តល់អាហាររបៀបផ្សេងៗទៀតផ្តល់ជីវជាតិដូចការបំបៅដោយទឹកដោះម្តាយដែរ ឬទេ ?

មាន /មិនមាន

៤- តើការបំបៅកូនដោយទឹកដោះម្តាយមានផលប្រយោជន៍ដល់សុខភាពមាតាដែរ ឬទេ ? *មាន/មិនមាន*

៥- បើមាន តើវាមានប្រយោជន៍ដូចម្តេចខ្លះ ?_____

៦- តើមាតាដែលបំបៅដោះកូនអាចធីកគ្រឿងស្រវឹងបានទេ ? *បាន/មិនបាន* ជក់បារី? *បាន/មិនបាន*

៧- តើស្ត្រីត្រូវបូមទឹកដោះពោ ដើម្បីផលិតទឹកដោះដែរ ឬទេ ? ***ត្រូវ/មិនចាំបាច់ត្រូវ***

៨- តើម្តាយរបស់អ្នកបានបំបៅដោះដល់អ្នកដែរ **ឬទេ** ?- ***បាន/មិនបាន***

ផ្នែក D: ឥរិយាបថទាក់ទងនឹងការបំបៅកូនដោយទឹកដោះម្តាយ

១- តើអ្នកជឿថា ស្ត្រីគួរបំបៅដោះកូនតែមួយមុខគត់រយៈពេល ៦ខែ ដែរ ឬទេ? *ជឿ/មិនជឿ*

២- បើមិនជឿ តើអ្នកជឿថា ទារកគួរឱ្យបៅអ្វី នៅក្រៅមួយខែដំបូង ?

(បើបំបៅដោយទឹក សូមបញ្ជាក់ ទឹកឆ្អិន ឬសៅ)

៣- តើអ្នកមានបញ្ហាអ្វីខ្លះជាមួយនឹងការបំបៅដោះកូន ? ចូរគ្មួសជ្រើសយកចំណុចដែលមាន :

ទារកយំ រកឹតខាន់ស្លឹម ខ្លះជាតិទឹក កូនដេកច្រើន បញ្ហាប្រកាន់ខ្លាប់ អ៊ិចកចិត្ត

ទារកស្រកទម្ងន់ ផ្សេងៗ

៤- តើអ្នកគិតថា ការបំបៅកូនដោយទឹកដោះម្តាយ ប៉ះពាល់ដល់ការថែទាំសុខភាពជិកគ្រួសារផ្សេងទៀតដែរ ឬទេ?

ប៉ះពាល់/មិនប៉ះពាល់

៥- តើអ្នកខ្មាស់គេទេ ក្នុងការបំបៅកូននៅទីសាធារណៈ ? *ខ្មាស់/មិនខ្មាស់*

៦- តើអ្នកដឹងថា វាសំខាន់សំរាប់មាតាទេ ចំពោះការដែលមានកន្លែងពិសេសមួយក្នុងទីសាធារណៈសំរាប់

បំបៅកូន នោះ ? *សំខាន់/មិនសំខាន់*

៧- តើអ្នកបានពន្យាក់ណើតទេ ? ***បាន/មិនបាន***

៨- បើបាន តើតាមវិធីណា ? *ថ្នាំច្រាប់ ថ្នាក់ចាក់ ស្រោមអនាម័យ ផ្សេងៗ*

ផ្នែក E : អាកប្បកិរិយាទាក់ទងនឹងការបំបៅកូនដោយទឹកដោះម្តាយ

១- តើអ្នកបានបំបៅទឹកដោះដល់កូនពៅរបស់អ្នកដែរ **ឬទេ** ? ***បាន/មិនបាន***

២- បើបាន តើអ្នកចាប់ផ្តើមបំបៅនៅពេលណាបន្ទាប់ពីប្រសូត្រ ?

ក្នុងរយៈពេល ១ម៉ោង ក្នុងរយៈពេល ២៤ ម៉ោង ក្នុងរយៈពេល ១ សប្តាហ៍

៣- ជាមធ្យម តើអ្នកបំបៅដោះកូនប៉ុន្មានម៉ោងក្នុងមួយថ្ងៃ ?

១ ២ ៣ ៤ ៥ ៦ ៧ លើសពី ៧ ម៉ោង

៤- មុន ៦ ខែនេះ ក្រៅពីទឹកដោះម្តាយ តើអ្នកមានផ្តល់អាហារអ្វីផ្សេងដល់ទារកទេ ? *មាន/មិនមាន*

៥- តើមាន ចូរគូសជុំវិញចំណុចដែលមានដូចខាងក្រោម:

ទឹកដោះគោផៅ ទឹកដោះគោកំប៉ុង ទឹកស្រាដំបែ ទឹកឆ្អិន ទឹកឆៅ ឃបរ អាហារកុមារ

ផ្សេងៗ: _

៦- **តើអ្នកស្គាត់ជំនាញក្នុងការបំបៅដោះកូនដែរ ឬទេ ?**

មិនស្គាត់ / ស្គាត់តិចៗ / មិនដឹង / ស្គាត់ / ស្គាត់ខ្លាំង

៧- តើអ្នកត្រូវការជំនួយសំរាប់ការបំបៅដោះកូនដែរ ឬទេ ? *ត្រូវការ/មិនត្រូវការ*

៨- **មកដល់ពេលនេះ អ្នកនៅបំបៅដោះកូនដែរ ឬទេ ?** ***នៅ/ឈប់រួចហើយ***

៩- បើឈប់ តើអ្នកឈប់បំបៅដោះកូនដោយសារហេតុអ្វី ? ចូរគូសជុំវិញចំណុចដែលមានដូចខាងក្រោម:

ឈឺ

ចាននៃផែនការឈប់នៅពេលនោះ កូនឈប់ដោយខ្លួនឯង ជួបបញ្ហា ការណែនាំពីមិត្តភក្តិ

*ការផ្តល់អាហារបៅផ្សេងល្អជាង គ្មានការគាំទ្រ ផ្សេងៗ:*_____

ផ្នែក F: កម្មវិធីគាំទ្រការបំបៅកូនដោយទឹកដោះម្តាយ

១- តើផ្ទាំរូបសំរាប់ធ្វើភាពឪពុកម្តាយ/មាតាមុនពេលប្រសូត្រ នៅជិតកន្លែងដែលអ្នករស់នៅ ឬទេ ?

នៅជិត /នៅឆ្ងាយ

២- បើនៅជិត តើអ្នកបានប្រើប្រាស់កម្មវិធីទាំងនោះជាមួយកំណើតកូនពៅរបស់អ្នកទេ ? *បាន/មិនបាន*

៣- **បើបាន តើអ្នកមានការលំបាកក្នុងការចូលរួមក្នុងកម្មវិធីទាំងនោះទេ ?** ***មាន/មិនមាន***

៤- បើមាន ចូរគូសជុំវិញចំណុចដែលមានដូចខាងក្រោម:

មិនត្រូវការកម្មវិធី មិនត្រូវការពត៌មានបន្ថែម មិនចូលចិត្តកម្មវិធី ត្រូវបង់ថ្លៃ ការធ្វើដំណើរ

ចំងាយមិនសមរម្យ គ្មានការថែទាំកូន ផ្សេងៗ: _

៥- តើអ្នកដឹងពីចំនាត់ចំនងរបស់អ្នកទៅនឹងសហគមន៍មូលដ្ឋានរបស់អ្នកច្រើនប៉ុណ្ណា ?

ខ្សោយខ្លាំង/ខ្សោយខ្លះៗ / មិនប្រាកដ / ខ្លាំងខ្លះៗ / ខ្លាំង

៦- តើអ្នកស្គាល់កន្លែងត្រូវទៅដើម្បីទទួលការគាំពារការបំបៅកូនដោយទឹកដោះម្តាយ នៅក្នុងសហគមន៍របស់អ្នកដែរ ឬទេ ប្រសិនបើអ្នកត្រូវការ ?

* តើអ្វីដែលធ្វើឱ្យអ្នកក្លាយជាមាតាដ៏ល្អមួយរូបបាន ? _____

Appendix F: International Code of Marketing Breast Milk Substitutes

No advertising of these products to the public.

No free samples to mothers.

No promotion of products in health care facilities.

No company mothercraft nurses to advise mothers.

No gifts or personal samples to health workers.

No words or pictures idealizing artificial feeding, including pictures of infants on the labels of the products.

Information to health workers should be scientific and factual.

All information in artificial infant feeding, including the labels, should explain the benefits of breastfeeding, and the costs and hazards associated with artificial feeding.

Unsuitable products, such as sweetened condensed milk, should not be promoted for babies.

All products should be of a high quality and take account of the climatic and storage conditions of the country where they are used.

(WHO/UNICEF, 1981)

Appendix G: Ten Steps to Successful Breastfeeding

Every facility providing maternity services and care for newborn infants should:

1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all the pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within half an hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
7. Practice rooming-in – that is, allow mothers and infants to remain together – 24 hours a day.
8. Encouraging breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.