

# Breastfeeding in Cambodia: Mother Knowledge, Attitudes and Practices

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## Abstract

**Purpose:** To conduct a knowledge, attitudes and practices study of breastfeeding in the province of Krong Kep, Cambodia.

**Methods:** Mothers' breastfeeding knowledge, attitudes and practices were evaluated using a structured questionnaire. The questionnaire was administered in Khmer to women with at least one child less than 60 months of age. Women meeting the eligibility requirements (N = 141) answered questions regarding their infant feeding practices, including initiation and duration of breastfeeding.

**Findings:** In Cambodia, the decision to breastfeed is rooted in a history of poverty. Twenty-five percent of women sampled initiated breastfeeding within the first hour post-delivery. In total, 82% of women initiated breastfeeding within the first 24 hours post-delivery, and 53% of women breastfed exclusively for exactly the recommended 6 months' duration. Nine women who reported exclusive breastfeeding for 6 months did not initiate breastfeeding within the first 24 hours post-delivery, likely because of the cultural practice of "roasting." Professional breastfeeding support programs do not exist in Krong Kep, Cambodia.

## Introduction

The Millennium Development Goals (MDGs) provide the international public health community with an eight-point action framework to reduce global poverty and increase sustainable development by 2015. Recognizing that the path to achieving the MDGs is unique per country, the Royal Government of Cambodia (RGC) adapted the MDGS to better suit the realities of a country

currently recovering from war. The formation of The Cambodia Millennium Development Goals (CMDGs) demonstrates the country's firm commitment to achieving the MDGs, including the reduction of child mortality (MDG4) and the improvement of maternal health (MDG5) (United Nations Development Programme 2010). Maternal, neonatal and child health (MNCH) remains a prominent priority of primary healthcare in Cambodia, and thus breastfeeding promotion is of utmost importance.

The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) unanimously recommend exclusive breastfeeding for the first six months of life for healthy, term infants (WHO–UNICEF 2003). The WHO (2004) defines 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 of life for numerous health benefits, including the intake of colostrum, a highly nutritious form of breast milk produced at the end of pregnancy.

On a global level, it has been reported that the percentage of children in the world who are exclusively breastfed (< 6 months) is 38% (UNICEF 2008). In Cambodia, the percentage of women who exclusively breastfeed their infants during the first six months of life has risen from 11% in 2000 to 60% in 2005 (National Institute of Public Health (NIPH), National Institute of Statistics (NIS) and ORC Macro, 2006; UNICEF 2008). However, only 35% of children born in Cambodia are breastfed within one hour of birth and 68% within one day of birth. Additionally, more than half of all children (56%) born in Cambodia are given a prelacteal feed, something other than breast milk, during the first three days of life (NIPH, NIS and ORC Macro, 2006).

The province of Krong Kep ("Kep") is located in the southwestern region of Cambodia, 173 kilometres south of Phnom Penh. In 2003, the population of Kep was estimated at 35,434 (Ministry of Health Cambodia [MoH] 2004). The objective of the study was to assess the knowledge, attitudes and practices (KAP) of breastfeeding women in Kep, while acknowledging the existence of cultural barriers that affect a women's decision to breastfeed. Likewise, this study acknowledges that the decision to breastfeed or not is often 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. In Cambodia, little has been documented on infant feeding practices, but knowledge of specific beliefs and practices is vital to the effectiveness of interventions. Thus, this study will contribute to the baseline data needed to implement maternal and child services in Kep.

## Methods

### Data Collection

Data were collected between June 12 and 24, 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 informed consent was obtained.

### Sample Size

Interviews were conducted in each of the five 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 eligible respondents refused to participate in the study.

### 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 Kep. Questions were adapted from a previous study on maternal mortality in Kep, and new questions were added to reflect the goals and objectives of this project (Kalaichandran and Zakus 2007). The questionnaire was tested and refined in Cambodia by Dr. Tung Rathaby, Ministry of Health Cambodia, before implementation. The final questionnaire was submitted for ethical review and validated by both Lakehead University, in Ontario, Canada, and the National Ethics Committee for Health Research (NECHR) within the Cambodian Ministry of Health. The final questionnaire was sent to an accredited translator within Cambodia to be translated into Khmer (see Appendices A and B).

### Questionnaire Division

The questionnaire consisted of six sections. The first section 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 the lowest status and brick the highest. Education was stratified into five layers corresponding to approximate literacy levels. These levels were based on findings that a minimum of four 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 (MoH 1999). Education levels were defined as follows: 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 second section examined maternal health behaviour during pregnancy. Questions focused on pregnancy history in relation to the youngest child only. Questions were asked regarding the stage of pregnancy at which antenatal care was received, number of visits, by whom care was given and location of care. Women were also asked questions about the type of birth (vaginal versus caesarean), location of delivery and possible complications during delivery as possible factors attributed to breastfeeding knowledge, attitudes and practices.

The third section 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 the baby should be exclusively breastfed. Additional questions assessing knowledge about the effects of breastfeeding on maternal health were included, as well as questions used to assess societal transfer of breastfeeding myths.

The fourth section 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. Additional questions tested the community's attitude toward breastfeeding, including if women feel shy to breastfeed in public places and whether breastfeeding mothers require a special place to breastfeed in public. A final question was asked regarding subjects' attitudes about birth spacing.

The fifth section documented information on subjects' breastfeeding behaviour and practice. 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.

The last section examined breastfeeding support programs within Kep province. 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 was included in the refined copy of the questionnaire to assess mothers' overall self-esteem and to provide a conclusion to the questionnaire process. The question (What makes you a good mother?) was open-ended and had the potential to build cultural relations.

### **Data Analysis**

Using Microsoft Office Excel 2003, all data were entered into a spreadsheet. Descriptive statistics were used to organize and summarize the information obtained from the population sample (N = 141). Many steps were employed to ensure data trustworthiness. To demonstrate credibility, the researcher checked with the translator both 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 were 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 another setting.

### **Results**

#### **Demographics**

Krong Kep Municipality, Cambodia, encompasses 16 villages. Subjects meeting the inclusion criteria were randomly selected. The largest numbers of respondents were from Chom Kabey village, while the least were from Ou Doung village. Type of house was equally divided between thatch (29.1%), wood (31.9%), and brick (29.8%).

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. Almost all women were married (98.6%), the mean years of marriage for the women in the sample being 9, with a range of 1 to 29 years. The mean educational level for a breastfeeding mother was 4.3 years (literate, some primary education), and the mean 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.

The mean number of children per woman was 2.87, with the number of children increasing with maternal age. At the time of interviews, nine women were currently pregnant, and the majority of married, non-pregnant women were not using birth spacing.

#### **Antenatal Care and Pregnancy History of Respondents**

The majority of women (75%) had received some form of antenatal care and advice in the most recent pregnancy and delivery. Most of these women received antenatal care for the first time during the fifth month of pregnancy (30%). One quarter of women did not receive any care. Forty-two percent of women sampled gave birth with a traditional birth attendant (TBA). The second most common person to assist with delivery was a midwife. Almost all women had a vaginal delivery (98.6%). Further, most women gave birth at home (60%).

#### **Attitudinal and Intrapersonal Characteristics**

While there is no way to know what the subjects' intended breastfeeding duration was or when the decision to breastfeed was made, the data indicate that several of the women did not breastfeed for as long as they had intended. Ninety-four percent of women sampled believed that they should breastfeed for the recommended six months. However, only 71% breastfed for the optimal six months or longer. Thus, almost a quarter of all women sampled responded that their expectations were not the same as their experience. Most respondents were comfortable with their skills in breastfeeding, and 75% of women sampled indicated that they were "not shy" to breastfeed in public.

#### **Breastfeeding Initiation and Duration Rates**

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% waited longer than 24 hours to initiate breastfeeding (see Table 1).

**Table 1. Initiation of breastfeeding**

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%

Results indicate that more than half of the women sampled (53%) breastfed exclusively for the recommended six months' duration. Seventy-one percent breastfed exclusively for six months or longer. Few women (nine) who reported exclusive breastfeeding for 6 months did not initiate breastfeeding within the first 24 hours post-delivery (see Table 2).

**Table 2. Duration of breastfeeding**

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%

### 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 that can be separated into two categories: those originating from the infant and those originating from the mother. "Baby crying" and "baby won't breastfeed" were problems originating from the infant as reported by the mother. 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," which will be reviewed in the Discussion).

### Complementary and Supplementary Feeding

Of those women who did not exclusively breastfeed for the recommended six months minimum (n = 39), many fed their infants boiled sugar water and solids (cake, porridge and rice). The total exceeds 100% because a number of women gave more than one source (see Table 3).

Table 3. Complementary and supplementary feeding

Supplementary item	Frequency	Percent
Boiled water	33	84.6%
Boiled sugar water	27	69.2%
Cows' milk	13	33.3%
Canned/powdered milk	13	33.3%
Solids (cake, rice, porridge)	34	87.2%
Unboiled water	3	7.7%
Breast milk from another woman	2	5.1%

### Breastfeeding Support Programs Offered to Pregnant Women and New Mothers

Almost all women (96%) reported that breastfeeding support programs or “mother classes” did not exist in their villages. All of the six women who responded that breastfeeding support programs did exist in their village reported attending those programs, which may indicate the value of support programs in this community. Lastly, the majority of women (88%) stated they felt a strong sense of belonging to the local community.

### Discussion

A variety of findings specific to Cambodian culture emerged as a result of the KAP study. For many of the respondents, cultural themes likely affected their decision to initiate and continue exclusive breastfeeding for the recommended six months. Results must also be interpreted in reference to Cambodia's historical background. Vast changes occurred within Cambodian society during the years of Khmer Rouge rule (1975–1979) (Ledgerwood 1994). Decisions made by women living in Cambodia today are rooted in historical values that may have been influenced by the Khmer Rouge regime, including a loss of education. This argument is especially important in reference to demographic findings from the KAP study respondents. Mothers participating in the study had a mean age of 29 years, with an age range from 18 to 50 years. This finding suggests that the average respondent was born during the last year of the Khmer Rouge regime and can be identified as a “genocide survivor.” Khmer mothers have thus been forced to make profound decisions regarding their health and the health of their infant amidst a country rooted in a history of violence and a society entrenched in poverty.

Additional demographics from this KAP study are revealed as similar to statistical results found in the Cambodia Demographic Health Survey (NIPH, NIS and ORC Macro, 2006). A comparison of the two studies reveals little change in attribute characteristics of Khmer women from the province of Kep (see Table 4).

Table 4. Comparison of demographics from the KAP study 2008 and the CDHS 2005 (NIPH, NIS, and ORC Macro, 2006)

Demographic	KAP Study (2008)	CDHS 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	3.5
No education/illiterate	14.9%	14.3%

Most respondents (75%) received some form of antenatal care. Unfortunately, Cambodian women in this study are waiting too long to seek antenatal care and health advice. Healthcare professionals recommend that the first antenatal visit occur within the first three months of pregnancy, not during the fifth month as found to be the case in Kep (NIPH, NIS and ORC Macro, 2006). Moreover, most women (60%) choose to give birth at home. This finding is slightly lower than the CDHS (NIPH, NIS and ORC Macro, 2006) report, which found that 83% of mothers delivered at home. A significant decline in the percentage of deliveries 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 location of delivery. Further, the KAP study found that women were almost equally divided in their choice of provider during delivery, with slightly more women using a TBA (42%) than a midwife (36%). It should be noted that for the purpose of this study TBAs are assumed to have no formal training, which is consistent with definitions of TBAs provided in other research (United Nations Population Fund [UNFPA] 2006). As TBAs are often used to minimize costs, this finding may indicate that a women's actual behaviour does not reflect her true preference, but instead her decision to use a TBA for assistance during delivery may be based on her inability to pay for a trained healthcare professional such as a 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. Thus, the impact on antenatal care may be grave if a Khmer mother decides to rely solely on a TBA for assistance and does not receive appropriate counselling regarding breastfeeding.

Likewise, many different factors can prevent women from initiating breastfeeding and breastfeeding exclusively for the recommended six months. 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 indicate that several of the women did not breastfeed for as long as they had 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, especially if a mother has not received antenatal care. Facilitation of breastfeeding education and support should begin during the early stages in pregnancy and continue post-delivery. However, the KAP study found that despite having been provided with little, if any, formal breastfeeding education and support, most women (64%) were confident with their breastfeeding skills and were "not shy" (75% of women) to breastfeed in public. 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.

Early initiation of breastfeeding is recommended by healthcare 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 the WHO-UNICEF. This finding is slightly lower than data from the CDHS (NIPH, NIS and ORC Macro, 2006) study, which found that 31% of women from Krong Kep started breastfeeding within the first hour. More importantly, the number of women initiating breastfeeding within a 24-hour period doubles (57%) for a total of 82% initiating breastfeeding within one day following delivery. This key finding is encouraging and likely the 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 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, a traditional custom reported throughout the KAP study was the cultural practice of "roasting," which occurs immediately following childbirth. Roasting is practised by women in order to increase "internal heat" that is assumed lost during delivery (UNFPA 2006). Although specific questions were not asked regarding this traditional

practice, roasting emerged as a prominent theme. This finding is significant because the practice of roasting may delay the onset of breastfeeding. Mothers who participate in the cultural traditional may delay breastfeeding initiation or be separated from their infants while they roast. Moreover, a study conducted by UNFPA (2006) found that a quarter of TBAs advised against 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 stages of breastfeeding. Likewise, this finding is of concern if it indicates that one in five children are being given a prelacteal feed, that is, something other than breast milk, during the first 3 days of life. Prelacteal feeds often include unboiled water, which is likely harmful to the child. 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. It is also clear that to be successful, such programs must respect and incorporate some modified form of roasting.

The WHO recommends exclusive breastfeeding for an infant's first six months of life (WHO 2003). Results from the KAP study indicate that more than half of women sampled (53%) breastfed exclusively for a minimum of six months. This result is slightly lower than a countrywide statistic that estimates the percentage of children who are exclusively breastfed at 60% (UNICEF 2008). It is important to note that KAP study findings could not be compared to the CDHS 2005 (NIPH, NIS and ORC Macro, 2006) as data were not provided for the region of Krong Kep. Moderately low rates of exclusive breastfeeding for six months' duration, as found by the KAP study, suggest that vast improvement is needed in order to effect decreasing overall rates of child malnutrition, morbidity and mortality. Additionally, a few women (nine) who reported exclusive breastfeeding for six months did not initiate breastfeeding within the first 24 hours post-delivery. Although it cannot be confirmed that these children were given a prelacteal feed prior to breastfeeding initiation, the finding may suggest that some women understood "exclusive breastfeeding" to mean "predominately" breast milk. Alternatively, it may indicate that initiation of breastfeeding is being delayed on purpose for cultural reasons.

Lastly, almost all women (96%) reported that breastfeeding support programs or "mother classes" did not exist in their village. This finding suggests that educational classes directed at health promotion and supporting breastfeeding mothers simply do not exist in Kep. 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.

## 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 Kep must be relevant to Khmer mothers and refrain from becoming "culture blind policies" (McMurry 2007). Renewed energy and action, through data, research and evaluation, are needed to protect Khmer mothers and children. Results from the KAP study warrant the implementation of outreach breastfeeding support programs for mothers in Krong Kep, Cambodia. As members of a "global

village,” we have 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. Khmer mothers need clean water, adequate food and access to healthcare. Alleviating the poverty of Khmer mothers is essential in the promotion of breastfeeding.

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## Appendix A : 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 Clinic
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 helpful? \_\_\_\_\_
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 1 hr 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 Child 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?

Appendix B: Questionnaire in Khmer

ផ្នែក A : សំណួររួមជាសរុប

- ១- តើអ្នករស់នៅក្នុងភូមិអ្វី ? \_\_\_\_\_
- ២- តើផ្ទះដែលអ្នកកំពុងរស់នៅជាផ្ទះប្រភេទអ្វី ? ផ្ទះបិតដី ផ្ទះប្រគំស្បូវ 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 : ប្រេងផ្តិតបាត់ផ្តាច់

- ១- ក្នុងអំឡុងពេលមានផ្ទៃពោះក្រោយរបស់អ្នក តើអ្នកបានទទួលការថែទាំមុនកំណើតដែរឬទេ ? បាន/មិនបាន
- ២- បើបាន តើអ្នកបានទទួលការថែទាំសុខភាពពេលមានផ្ទៃពោះ និងពេលប្រសូត្រ ពីអ្នកណា?

២- រក្សាទុក រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម្បីយើង ខ្លួនយើងហើយ ឬ ម្ហូបធាតុដើម

៦- ជំនួយនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ យល់ច្បាស់  
ឡើយ B : រក្សាទុកដោយប្រើម្ហូបធាតុដើម

- ៦៧- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៦៨- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៦៩- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧០- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧១- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧២- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៣- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៤- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៥- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៦- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៧- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៨- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៧៩- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨០- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨១- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨២- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៣- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៤- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៥- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៦- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៧- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៨- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៨៩- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_
- ៩០- រយៈពេលយូរនៃការស្រោចទឹកដោយប្រើម្ហូបធាតុដើម ៖ \_\_\_\_\_

ឡើយ B : រក្សាទុកដោយប្រើម្ហូបធាតុដើម

ផ្នែក C : ចំណេះដឹងទាក់ទងនឹងការបំបៅកូនដោយទឹកដោះម្តាយ

- ១- បន្ទាប់ពីប្រសូត្រូវរយៈពេលប៉ុន្មានថ្ងៃដំបូងក្រោយមកទារកទៅរកដោះ ? \_\_\_\_\_
- ២- ត្រូវឱ្យទារកបំបៅដោះដោយម្តាយមុនគេរយៈពេលប៉ុន្មាន ? \_\_\_\_\_
- ៣- តើរបៀបផ្តល់អាហាររបៀបផ្សេងៗទៀតផ្តល់ជីវិតដល់កូនបំបៅដោះដោយទឹកដោះម្តាយដែរ ឬទេ ?  
មាន / មិនមាន
- ៤- តើការបំបៅកូនដោយទឹកដោះម្តាយមានផលប្រយោជន៍ដល់សុខភាពទារកដែរ ឬទេ ? មាន / មិនមាន
- ៥- បើមាន តើវាមានប្រយោជន៍ដូចម្តេចខ្លះ ? \_\_\_\_\_
- ៦- តើទារកដែលបំបៅដោះកូនអាចទឹកក្រៀមស្រវឹងបានទេ ? បាន / មិនបាន ជាក់លាក់ ? បាន / មិនបាន
- ៧- តើគ្រូប្រឹក្សាបំបៅដោះដោយទឹកដោះម្តាយ ដើម្បីផ្តល់ជីវិតដល់កូនដែរ ឬទេ ? ហ្ន៎ / មិនហ្ន៎
- ៨- តើម្តាយរបស់អ្នកបំបៅដោះដល់កូនដែរ ឬទេ ? បាន / មិនបាន

ផ្នែក D : គំរើយាមនៃការបំបៅកូនដោយទឹកដោះម្តាយ

- ១- តើអ្នកជឿថា គ្រូប្រឹក្សាបំបៅដោះកូនតែមួយមុនគេរយៈពេល ៦ ខែ ដែរ ឬទេ? ជឿ / មិនជឿ
- ២- បើមិនជឿ តើអ្នកជឿថា ទារកគួរឱ្យបំបៅដោះ ទៅបំបៅដោះដោយម្តាយដែរ ឬទេ ?  
(បើបំបៅដោះដោយទឹក សូមបញ្ជាក់ ទឹកអ្វី ឬនៅ)
- ៣- តើអ្នកមានបញ្ហាអ្វីខ្លះជាមួយនឹងការបំបៅដោះកូន ? ចូរចូលរៀបចំចំណុចដែលមាន :  
ទារកយឺត កើតខាតទម្ងន់ ខ្លះជាតិទឹក កូនដេកច្រើន បញ្ហាប្រកាសខ្លាច ពិបាកទឹក  
ទារកស្រែកទម្ងន់ ផ្សេងៗ \_\_\_\_\_
- ៤- តើអ្នកគិតថា ការបំបៅកូនដោយទឹកដោះម្តាយ ប៉ះពាល់ដល់ការចែកចាយអាហារឱ្យទារកផ្សេងទៀតដែរ ឬទេ?  
ប៉ះពាល់ / មិនប៉ះពាល់
- ៥- តើអ្នកខ្លាចគេទេ ក្នុងការបំបៅកូននៅទីសាធារណៈ ? ខ្លាច / មិនខ្លាច

- ៦- តើអ្នកដឹងថា វាសំខាន់សំរាប់មាតាទេ ចំពោះការដែលមានកន្លែងពិសេសមួយក្នុងទីសាធារណៈសំរាប់  
បំបៅកូន នោះ ? សំខាន់/មិនសំខាន់
- ៧- តើអ្នកបានពន្យាកំណើតទេ ? បាន/មិនបាន
- ៨- បើបាន តើតាមវិធីណា ? *ផ្ទះក្រាប ផ្ទះចាក់ រៀនមន្តអាម័យ ផ្សេងៗ* \_

**ផ្នែក E : អាកប្បកិរិយាគាំទ្រនិងការបំបៅកូនដោយទឹកដោះម្តាយ**

- ១- តើអ្នកបានបំបៅទឹកដោះដល់កូនពេញលេញរបស់អ្នកដែរ ឬទេ ? បាន/មិនបាន
- ២- បើបាន តើអ្នកចាប់ផ្តើមបំបៅនៅពេលណាបន្ទាប់ពីប្រសូត្រ ?  
*ក្នុងរយៈពេល ១ ម៉ោង      ក្នុងរយៈពេល ២៤ ម៉ោង      ក្នុងរយៈពេល ១ សប្តាហ៍*