# TIMING OF BREASTFEEDING INITIATION IN RURAL HAITI: A FOCUSED ETHNOGRAPHY

by

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#### Abstract

## TIMING OF BREASTFEEDING INITIATION IN RURAL HAITI: A FOCUSED ETHNOGRAPHY

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A focused ethnography aimed at describing the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices was conducted in Artibonite, Haiti during June of 2013. A total of 25 Haitian mothers with children less than 12 months old participated in the study, which included the use of interviews, observations, and artifacts as data sources. A thick description was developed through the integration of qualitative and quantitative data. The self-reported timing of breastfeeding initiation ranged from 10 minutes birth to 24 hours after birth among the 23 participants able to quantify the specific time of breastfeeding initiation.

Early breastfeeding initiation (breastfeeding initiation in the first hour of life) occurred with 16 (64%) of the sample and delayed breastfeeding initiation occurred with the remaining 9 (36%) of the sample. Mothers described baby care by birth attendants as well as actual and perceived health issues of the mother and child as some of the factors influencing timing of breastfeeding initiation. Future research should further explore factors influencing timing of breastfeeding initiation particularly from the perspective of various types of birth attendants.

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## Chapter I

## Introduction

More than one out of every 10 Haitian children dies before his or her fifth birthday (Rajaratnam et al., 2010). Globally, children under the age of five are at highest risk of mortality during the neonatal period with neonatal mortality (deaths in the first 28 days of life) accounting for 43% of all under five deaths (World Health Organization [WHO], 2012). Breastfeeding has been identified as the most powerful preventative strategy to reduce the number of deaths in children under five years old (Jones et al., 2003). Timing of breastfeeding initiation is a critical breastfeeding practice. Early breastfeeding initiation defined as breastfeeding initiation in the first hour of life is associated with a 19-22% reduction in neonatal mortality (Edmond et al., 2006; Mullany et al., 2008). Early breastfeeding initiation and other breastfeeding indicators are presented on Table 1.

Table 1 Breastfeeding Indicators

| Breastfeeding indicator        | Definition  | Related optimal breastfeeding practice   |
|--------------------------------|---|--|
| Breastfeeding initiation       | A child is fed by a lactating woman's breast for the first time. The indicator is based on if a child was "ever breastfed", therefore a single breastfeed is all that is necessary for breastfeeding initiation to occur (WHO, 2013e.). | Optimally breastfeeding initiation occurs with each mother child dyad (World Health Organization, [WHO], 2013a.).  |
| Early breastfeeding initiation | Breastfeeding initiation is within the first hour (60 minutes) of life (WHO, 2013a.).   | The optimal timing of breastfeeding initiation is within the first hour (60 minutes) of life also known as early breastfeeding initiation (WHO, 2013a.). |
| Exclusive breastfeeding        | "The infant receives only breast milk. No other liquids   | Optimally exclusive breastfeeding occurs for 6   |

Table 1 - continued

|                        | or solids are given – not even water – with the exception of oral rehydration solution, or drops/syrups of vitamins, minerals or medicines" (WHO, 2013b., paragraph 2). | months after birth (WHO, 2013a.).                                      |
|------------------------|---|--|
| Breastfeeding duration | The length of time a child is breastfeed, from birth to weaning (breastfeeding cessation).  | The optimal breastfeeding duration is 24 months or more (WHO, 2013a.). |

Table 2 Mortality Indicators

| Mortality indicators                  | Definition  |
|---------------------------------------|---|
| Adult lifetime risk of maternal death | "The probability of dying from a maternal cause during a woman's reproductive lifespan (WHO, 2010a., p. 5)."  |
| Maternal death                        | "The death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (WHO, 2010a., p. 4)." |
| Maternal mortality rate               | "Number of maternal deaths in a given period per 100 000 women of reproductive age during the same time-period (WHO, 2010a., p. 5)."  |
| Maternal mortality ratio              | "Number of maternal deaths during a given<br>time period per 100 000 live births during<br>the same time-period (WHO, 2010a., p. 5)."   |
| Neonatal mortality rate               | "The number of deaths among babies 0-28 days of lifeper 1000 live births" (WHO, 2013d., paragraph 3).   |
| Under five mortality rate             | The risk of a child dying before their fifth birthday and is expressed as the number of under five deaths per 1000 live born infants (WHO, 2013c.).   |

Early breastfeeding initiation rates are low throughout Haiti ranging from 30% to 55.4% regionally (WHO, 2009). Despite this, published studies have not adequately described the factors affecting the timing of breastfeeding initiation among Haitian

mothers. This focused ethnographic study aimed to describe the factors, principally the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers. The background and significance of the problem and theoretical perspective of the study will be described in detail, followed by the study's purpose, the study's questions, and essential assumptions of the study.

## Background and Significance

Haiti, the country commonly referred to as the poorest country in the Western Hemisphere, is located in the Caribbean on the island of Hispaniola (World Health Organization & Pan American Health Organization [WHO & PAHO], 2010). Haiti shares the island of Hispaniola with the Dominican Republic, which comprises approximately the Eastern two thirds of the island. Today, Haiti is a nation of approximately 9.8 million individuals and about half of Haitians are less than 20 years old (Central Intelligence Agency [CIA], 2012; WHO/PAHO, 2010).

Haitian Creole also referred to as "Creole" or "Haitian" by some sources is the universally spoken official language in Haiti (CIA, 2012; WHO/PAHO, 2010). French, spoken by about one tenth of the population is also an official language in Haiti (United States State Department [US SD], 2010). About 95% of Haitians are Black and 5% are multiracial or White (CIA, 2012). About half (51%) of Haitians 15 years old or older are not literate (World Bank, 2011).

Great disparities exist in Haiti between the classes stratified by race and language with the multiracial/White and/ or French speaking minority being the privileged class (WHO/PAHO, 2010). Approximately 50% of Haiti's capital is held by 1% of Haitians (British Broadcasting Corporation News, 2011). Seventy-six percent of the Haitian population has an annual income of less than 734 US dollars and 56% of Haitians has an

annual income less than 365 US dollars (United Nations World Food Programme [UNWFP], 2011).

Low-income countries such as Haiti (World Bank, 2011) bear a disproportionate burden of under-five mortality (Chan & Lake, 2012; Rajaratnam et al., 2010). Under five mortality is defined as the risk of a child dying before their fifth birthday and is expressed as the number of under five deaths per 1000 live born infants (World Health Organization, [WHO], 2013b). Globally, under five mortality has decreased (Chan & Lake, 2012); yet, Haiti's high under five mortality worsened from 99.8 in 2000 to 102.6 in 2010 (Rajaratnam et al., 2010). Haiti's economic hardships and complex social issues contribute to under five mortality in Haiti and create barriers to improving the under-five mortality rates.

Breastfeeding is a unique intervention for reducing under five mortality with characteristics that are particularly valuable in resource poor settings such as Haiti. Breastfeeding is considered the most powerful preventative strategy to reduce under five mortality (Jones et al., 2003). The only intervention with the potential to reduce under five mortality more than breastfeeding is the treatment-based intervention of oral rehydration therapy, which has the potential to reduce under five mortality by 15% (Jones et al., 2003). Globally, breastfeeding could reduce under five mortality by 13%, which is more powerful than other preventative strategies such as insecticide-treated nets, Haemonophilus influenza type b vaccine or measles vaccines which could reduce under five mortality by 7%, 4%, and 1% respectively (Jones et al., 2003).

Breastfeeding requires maternal investment of time and a debated amount of caloric expenditure but breastfeeding itself is essentially cost-free in terms of an external monetary investment. Although breastfeeding may not have an external monetary cost, the principle investigator (PI) acknowledges potential cost investment of resources such as education and support programs to improve or maintain optimal breastfeeding

practices. Breastfeeding is, however, a natural process and an intrinsic commodity of the mother child dyad. Unlike many other public health interventions such as vaccines, breastfeeding is not an external commodity that needs to be procured and transported to the target population, which is particularly valuable in remote and resource poor settings like Artibonite, Haiti, where this study was conducted. Artibonite is the Haitian region with the lowest early breastfeeding initiation rate of 30% (WHO, 2009) and thereby the region most in need of assessment of the factor affecting the timing of breastfeeding initiation (presence or absence of early breastfeeding initiation).

Knowledge of factors affecting the timing of breastfeeding initiation are needed to develop and test the effectiveness of community specific, culturally appropriate interventions aimed at improving early breastfeeding initiation rates in Haiti. Limited information regarding early breastfeeding initiation in Haiti exists, but one study identified negative beliefs regarding both colostrum and the health impact of colostrum as factors for not feeding colostrum (Perez-Escamilla et al., 2009). Colostrum is the first breast milk that is present during the first hour post birth when early breastfeeding initiation occurs. Colostrum and other related terms are presented on Table 3.

Table 3 Related Terms

| Related terms              | Definition  |
|----------------------------|---|
| Colostrum                  | "The yellowish, sticky breast milk produced at the end of pregnancy, is recommended by WHO as the perfect food for the newborn, and feeding should be initiated within the first hour after birth" (World Health Organization, [WHO], 2013a., paragraph 2). |
| early skin-to skin contact | "Placing the naked newborn prone on the mother's bare chest at birth or soon afterwards (within 24 hours of birth)" (Saloojee, 2008, paragraph 2).  |
| prelacteal feed            | Non breast milk "artificial feeds or drinks given to a baby before breastfeeding is Initiated" (WHO, 1993, p. 36).  |

Table 3 - continued

| skilled birth attendant | "An accredited health professional — such   |
|-------------------------|---|
|                         | as a midwife, doctor or nurse — who has     |
|                         | been educated and trained to proficiency in |
|                         | the skills needed to manage normal          |
|                         | (uncomplicated) pregnancies, childbirth and |
|                         | the immediate postnatal period, and in the  |
|                         | identification, management and referral of  |
|                         | complications in women and newborns"        |
|                         | (WHO, 2004, p.1).                           |

In other developing countries, multiple factors other than beliefs regarding colostrum, some of which are culturally-based have been associated with early breastfeeding initiation (Agho et al., 2011; Gerbaba et al., 2011; Lunney et al., 2010; Ogunlesi, 2010; Rogers et al., 2011). Published studies have not adequately described the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices and this ethnographic study aimed to address that specific gap in the literature.

#### Theoretical Perspective

Ethnographic studies necessitate the use of a theoretical framework and researchers have the freedom to select a theoretical framework that best fits their study (Fetterman, 2010). The principal investigator (PI) will use the Community Breastfeeding Network theory, which is presented in Figures 1 and 2, as the theoretical framework to guide this study. The Community Breastfeeding Network theory was first developed in 2010 by the PI because a theoretical framework specific to breastfeeding did not exist in peer-reviewed literature. Extensive literature review and a holistic concept analysis of breastfeeding (Bomer-Norton, 2013) contributed to the initial development and continued refinement of the Community Breastfeeding Network theory. The system-based theory pairs a holistic framework for understanding the complexity of breastfeeding with the categorization of optimal breastfeeding, which is consistent with all measurable indicators currently used in breastfeeding related research.

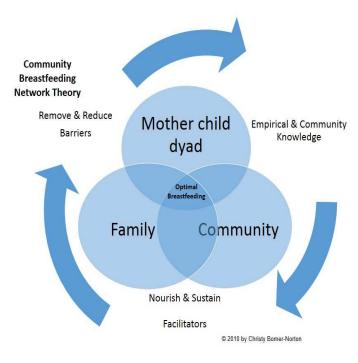


Figure 1 Community Breastfeeding Network theory

Systems theory is a type of grand theory based on the Aristotelian idea that a whole is more than the summation of the wholes' components (Bertalanffy, 1968, 1972). Similar to General Systems Theory, systems in the Community Breastfeeding Network theory are conceptualized as a whole or unit, and the systems come in many forms (Bertalanffy, 1950, 1972). The researcher using the theory identifies the system being explored in a specific breastfeeding study. In this case, the PI chose the system, consisting of mothers with children less than 12 months living in Artibonite, Haiti, for exploration of the factors influencing timing of breastfeeding initiation. Any system chosen by a researcher contains the three levels of the mother-child dyad, family, and community, even though the researcher may only directly assess one of the three levels.

Optimal breastfeeding only occurs at the intersection of mother-child dyad, family, and community and is the foundation for the middle range component of the Community Breastfeeding Network theory, which is presented in Figure 2. Optimal

breastfeeding is organized into the essential components, facilitators, and benefits of breastfeeding, which are described and defined in a way that is consistent with how breastfeeding is currently measured in empirical data.

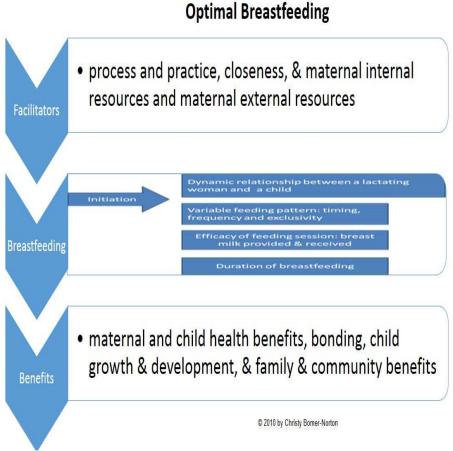


Figure 2 CBN theory: optimal breastfeeding

The five essential components of breastfeeding are described by a comprehensive list of measurable breastfeeding indicator categories. These components include breastfeeding initiation, a dynamic relationship, breastfeeding efficacy, variable feeding pattern, and breastfeeding duration. Breastfeeding is a dynamic process, therefore no single measure is sufficient to represent the concept. Specific measures

can be used, however, to assess each one of the five components of the concept.

Breastfeeding indicators can assess components of breastfeeding at the level of the mother-child dyad, family, community or a combination of the three.

This study focused on timing of breastfeeding initiation, an aspect of the variable feeding pattern component, although additional breastfeeding indicators were described. The facilitators of breastfeeding include feeding practices and process, closeness, maternal internal resources, and maternal external resources and the guided data collection aimed at describing facilitators of early breastfeeding initiation. Consistent with the cultural emphasis of ethnographic studies, maternal external resources that include social, cultural, and structural facilitators were the focus of this study.

The multitude of benefits breastfeeding provides are arranged into the five broad categories of maternal health protection, child health protection, bonding, child growth, and development, and family and community benefits in the Community Breastfeeding Network theory. The relationship between the essential component of breastfeeding and the benefits of breastfeeding are complex but one or more of the five essential components of breastfeeding are positively associated with each of the benefit categories. The benefits of breastfeeding, and particularly early breastfeeding initiation in terms of reducing under five mortality, which will be described in detail, in chapter two are compelling and provide strong justification for the value of this study.

The Community Breastfeeding Network theory is an appropriate theoretical framework to address the research problem, limited available knowledge of the factors affecting early breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices. The Community Breastfeeding Network theory provided structure to focus the data collection but did not restrict the research process. The PI

was open to relevant data outside the framework and any patterns or descriptions inconsistent with the framework that emerged from the data.

## Statement of the Purpose

The purpose of this mixed-methods, focused ethnographic study was to describe the factors, primarily the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers.

## **Study Questions**

- 1. What are the factors, primarily the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers?
- 2. When do Haitian mothers first breastfeed their children (self-reported timing of breastfeeding initiation)?

#### Statement of Essential Assumptions

The essential assumptions for this study are:

- 1. Breastfeeding is a natural process influenced by social and cultural factors.
- 2. Women in Haiti can accurately remember and honestly describe their experiences with breastfeeding after birth.
- 3. Environmental observations provide indicators of the poverty level as well as an environmental context for the timing of breastfeeding initiation in Haiti.
- 4. Observations of interactions between mother and child, including breastfeeding that occur after the first hour post birth, provide a social context to the timing of breastfeeding initiation.
- 5. Cultural materials used during the first hour after birth and for infant feeding, clothing, sleep, holding and care may be physical factors that influence the timing of breastfeeding initiation and provide context to factors that influence the timing of breastfeeding initiation.

## Summary of Chapter

Haiti is a low-income country (World Bank, 2011) with a high under five mortality rate (Rajaratnam et al., 2010). Timing of breastfeeding initiation is a critical breastfeeding practice with early breastfeeding initiation being associated with a significant reduction in neonatal mortality (Edmond et al., 2006; Mullany et al., 2008). Published studies have not adequately described the factors affecting the timing of breastfeeding initiation among Haitian mothers.

The aim of this focused ethnographic study was to describe the factors, primarily the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers. Additionally, data were collected about the specific self-reported timing of breastfeeding initiation. The Community Breastfeeding Network theory (CBN) was the theoretical framework used to guide the study.

#### Chapter 2

#### Critical Review of Relevant Literature

A critical review of literature was conducted to provide support for the value of this study. This study aimed to describe the factors, principally the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers. The review will describe timing of breastfeeding initiation, benefits of breastfeeding in terms of causes of under-five mortality, and facilitators of optimal timing of breastfeeding initiation. Data on the timing of breastfeeding initiation, benefits of breastfeeding in terms of causes of under-five mortality and facilitators of optimal timing of breastfeeding initiation will be synthesized and linked back to the Community Breastfeeding Network theory which is the theoretical framework guiding the study. The literature review will conclude with the identified gaps in literature and specific links to this study.

#### Review Methodology

The databases of CINAHL, Google Scholar, Medline and PubMed were searched using variations of the search terms "mortality," "under 5 mortality," and "neonatal mortality" with combinations of the search terms "breastfeeding," "developing country," and "Haiti" for the years 2008 through 2012. Additional searches focused on specific causes of under-five mortality through the addition of the search terms "diarrhea," "pneumonia", "growth" and "maternal mortality." The databases of CINAHL, Google Scholar, Medline and PubMed were also searched using the search terms "timing breastfeeding initiation," "early breastfeeding initiation" and "delayed breastfeeding initiation." The search terms "timing breastfeeding initiation," "early breastfeeding initiation" and "delayed breastfeeding initiation" were then combined with combinations of the search terms "factor", "facilitator" "developing country," and "Haiti" for the years 2008 through 2012.

Relevant literature obtained from the described searches was retained.

Additionally, appropriate literature known to the author, including pertinent landmark studies conducted prior to 2008, were included. Relevant information from salient organizations such as The World Bank, World Health Organization, and United Nations Children's Fund [UNICEF] was also integrated into the literature review. Global information was integrated with data from comparative resource poor countries and information specific to Haiti when available.

#### Global Goals

The Millennium Summit was an unprecedented meeting of world leaders (UN Millennium Project, 2006). The leaders committed to work together and invest in global action to decrease poverty. Eight goals with measurable indicators set to be accomplished by 2015 were developed. The goals are now known as the United Nations Millennium Development Goals [MDG] (UN Millennium Project, 2006). MDG 4 is the decrease of global deaths, in children less than five years old, by 66% from 1990 to 2015 (UN Millennium Project, 2006).

Under five mortality is defined as the risk of a child dying before the fifth birthday and is expressed as the number of under five deaths per 1000 live born infants (WHO, 2013). According to the World Health Organization, "under-five mortality is a leading indicator of the level of child health and overall development in countries. It is also a MDG (Millennium Development Goal) indicator" (WHO, 2013, paragraph 1).

Importance of Social, Cultural, and Structural Influences

Causes of under-five mortality and effective interventions to reduce such mortality are well documented in public health literature (Jones et al., 2003). Successful application of the documented interventions to specific settings is more complex.

Knowledge of the local realities including the social, cultural, and structural influences of

the community is needed to successfully implement a given intervention such as breastfeeding. Breastfeeding practices are difficult to separate from the cultural and social context where they occur (Thwala, Jones, & Holroyd, 2011). From an anthropologic approach, breastfeeding is much more complex than an individual decision (Sellen, 2001). Ethnography with an inherent focus on culture was, therefore, selected as the methodology of choice for this study.

## Timing of Breastfeeding Initiation

This study focused on the timing of breastfeeding initiation, an aspect of the variable feeding pattern component in the Community Breastfeeding Network theory. The variable feeding pattern component is one of the five essential components of breastfeeding described by the Community Breastfeeding Network theory, which is presented in Figures 1 and 2. Optimally, children should be breastfeed during the first hour of life, which is termed early breastfeeding initiation (WHO, 2012). The presence or absence of early breastfeeding initiation (breastfeeding initiation in the first hour of life) is typically used to assess the timing of breastfeeding initiation (WHO, 2008). Delayed breastfeeding initiation is a term used to describe the absence of early breastfeeding initiation.

Early breastfeeding initiation rates are low throughout Haiti and this study took place in Artibonite, the Haitian region with the lowest early breastfeeding initiation rate of 30% (WHO, 2009). Although the rates of early breastfeeding initiation are available for Haiti (WHO, 2009), the specific timing of breastfeeding initiation is not reported in any of the databases or peer review literature assessed. The specific timing of breastfeeding initiation in minutes or hours is particularly important when breastfeeding initiation is delayed beyond an hour because the timing provides context to the factors influencing timing of breastfeeding initiation. The specific timing of breastfeeding initiation would also

aid with the development of appropriate interventions to improve rates of early breastfeeding initiation.

#### Benefits of Breastfeeding

A comprehensive review of the known maternal health benefits, child health benefits, bonding, child growth, and development, and family and community benefits of breastfeeding will not be included in this review although the importance of such benefits is acknowledged. This review will highlight the child health protection and child growth benefits most directly linked to under five mortality. The benefits of breastfeeding and, particularly early breastfeeding initiation in terms of under-five mortality reduction, are compelling and provide strong justification for the value of this study.

Extreme poverty, the earthquake of 2010, and other complex issues have contributed to poor health outcomes in Haiti, the Western Hemisphere's poorest country (Margesson & Taft-Morales, 2010; World Bank, 2011). The children of Haiti are particularly vulnerable to mortality within this at risk nation (Rajaratnam et al., 2010; UNICEF, 2010). Optimal breastfeeding practices have the potential to significantly improve the problem of under-five mortality in Haiti (Black et al., 2008). The case for breastfeeding as a public health imperative in Haiti will be discussed within the context of the causes of mortality in children under the age of five. Available literature and identified gaps in the literature on breastfeeding and under five mortality in Haiti will provide further rationale for conducting this study.

## Haiti's Under Five Mortality Rate

This study was conducted in rural Artibonite, Haiti where children are at high risk of dying before the age of five. Globally, children living in rural areas are more likely to die before the age of five (WHO, 2013d.). Haiti is labeled a low-income country by The World

Bank (2011). Low-income countries such as Haiti bear a disproportionate burden of under-five mortality (Chan & Lake, 2012; Rajaratnam et al., 2010).

Haiti's high under five mortality rate of 102.6 deaths per 1000 live born infants can be better understood within the context of other nations under five mortality rates (Rajaratnam et al., 2010). During the same year of 2010, Iceland had the lowest under five mortality rate of 2.6 deaths per 1000 live born infants and the United States had an under five mortality rate of 6.7 deaths per 1000 live born infants. The Dominican Republic, the country that shares the island of Hispaniola with Haiti, had an under five mortality rate of 27.5 deaths per 1000 live born infants, which is about one fourth of Haiti's under five mortality rate (Rajaratnam et al., 2010).

## Breastfeeding and Under Five Mortality

Globally, inadequate breastfeeding results in the mortality of nearly 1.4 million children under the age of five each year (Black et al., 2008). In their classic article, Jones et al. (2003) estimated that 90% of the global deaths in children under the age of five were the result of preventable causes and that breastfeeding could reduce this preventable mortality by 13%. In 2009, 24,000 children under the age of five died in Haiti (UNICEF, 2010). Therefore, based on the application of the formulas established by Jones et al. (2003) to the UNICEF (2010) data, an estimated 21,600 Haitian children under the age of five who died in 2009 died of preventable causes, and 2,808 of those children's lives could potentially have been saved through breastfeeding.

Early Breastfeeding initiation and Neonatal Mortality

Globally, neonatal mortality contributes to 43% of the deaths in children less than five years old (WHO, 2012). Reducing neonatal mortality, therefore, is a critical component to reducing under five mortality. In a landmark study of 11,316 infants in Ghana, Edmond et al. (2006) found that infants breastfed during the first 24 hours of life

had a 16% reduction in neonatal mortality and breastfeeding within an hour of birth correlated with a 22% reduction in neonatal mortality. Subsequent studies have provided additional evidence linking early breastfeeding initiation with decreased neonatal mortality (Edmond et al., 2007; Mullany et al., 2008). Breastfeeding during the first hour was associated with a 19.1% reduction in neonatal mortality risk and breastfeeding in the first 24 hours was associated with a 7.7% reduction of neonatal mortality in a longitudinal cohort of 22,838 breastfed neonates in Nepal (Mullany et al., 2008).

Early Breastfeeding Initiation and Neonatal Mortality in Haiti

In 2009, 7398 neonates died in Haiti (UNICEF, 2010). The figure for the 2009 neonatal deaths was obtained by using the annual birth rate of 274,000 and the neonatal mortality rate of 27 deaths in children during the first 28 days post birth per 1000 live born infants for 2009 in Haiti (UNICEF, 2010). Haiti had an early initiation of breastfeeding rate of 44% in 2009 (WHO, 2009). No available dataset has included both the variables of neonatal mortality and early breastfeeding initiation in Haiti. However, the 7398 neonates who died in Haiti in 2009, who were among the 56% of Haitian neonates not breastfeed during the first hour of life could have benefited from the potential 19-22% reduction in neonatal mortality provided by early breastfeeding initiation (Edmond et al., 2006; Mullany et al., 2008; UNICEF, 2010; WHO, 2009). Artibonite, Haiti, has an early breastfeeding initiation rate of only 30% (WHO, 2009), therefore 70% of the infants were not breastfed in the first hour of life.

Under five mortality and Breastfeeding Exclusivity

In addition to early breastfeeding initiation, other specific breastfeeding indicators such as exclusive breastfeeding and breastfeeding duration have been linked with mortality reduction (Edmond et al., 2006; Edmond et al., 2007; Kuhn et al., 2010; Mullany et al., 2008). The lack of clean water and the high risk for food contamination make

exclusive breastfeeding particularly crucial in resource poor settings. Non-exclusively breastfed infants were 5.7 times more likely to die of infection during the neonatal period than infants exclusively breastfed (Edmond et al., 2007). Non-breastfeed children five months old and younger were 14.40 times more likely to die compared to exclusively breastfed children of the same age in a meta-analysis, which included studies from multiple nations (Lamberti, Walker, Noiman, Victora, & Black, 2011).

## Breastfeeding Exclusivity in Haiti

Optimally, children should be exclusively breastfed for the first six months of life (WHO, 2012). Between 2005 and 2009, 40.6% of Haitian children less than six months of age were breastfed exclusively (WHO, 2009). The median duration for Haitian children to be exclusively breastfed was only 1.5 months and ranged from .5 to 3 months regionally (WHO, 2009). In Artibonite, Haiti the median duration of exclusive breastfeeding is 2.0 months (WHO, 2009).

#### Under Five Mortality and Breastfeeding Duration

Shorter breastfeeding durations have been associated with increased risk of under-five mortality compared to longer durations of breastfeeding (Kuhn et al., 2010; Lamberti et al., 2011). Discontinuing breastfeeding resulted in significant risk of death in HIV-negative infants of HIV positive mothers in a randomized controlled trial of 749 maternal child dyads assessed from birth to two years (Kuhn et al., 2010). Studies assessing HIV positive women, such as the one just described are highly relevant since an estimated 67,000 HIV positive childbearing women live in Haiti (UNICEF, 2010). The association between breastfeeding duration and under five mortality has been found in diverse study samples (Lamberti et al., 2011). In a meta-analysis, Lamberti et al. (2011) found that non-breastfed children between six and 23 months were 3.69 times more likely to die than breastfeed children of the same age.

## Breastfeeding Duration in Haiti

Children should ideally be breastfed for at least the first 24 months of life (WHO, 2012). Specific data on the percentage of Haitian children breastfeed at 24 months are unavailable however; data on the median duration of breastfeeding in Haiti are available (WHO, 2009). The median duration of breastfeeding is 18.8 months in Haiti and ranges from 17.1 to 20.0 months regionally (WHO, 2009). In Artibonite, Haiti, the median duration of breastfeeding is 19.3 months (WHO, 2009).

## Causes of Under Five Mortality

## Haitian Earthquake of 2010

Haiti is prone to natural disasters and human conditions worsened when Haiti suffered from a devastating earthquake on January 12, 2010 (Margesson & Taft-Morales, 2010). Approximately 230,000 Haitians were killed and another 300,000 Haitians were hurt by the earthquake, which measured 7.0 on the Richter scale (Central Intelligence Agency, 2011; Margesson & Taft-Morales, 2010). The earthquake directly impacted approximately three million Haitians and displaced over a million Haitians (Margesson & Taft-Morales, 2010). The impact of the earthquake will also be discussed and in the context the healthcare provider shortage and risk of diarrhea.

#### Haitian Healthcare Provider Shortage

The 2010 earthquake also worsened the healthcare provider shortage in Haiti (United Nations Population Fund [UNPF], 2010). Prior to the earthquake, Haiti had one midwifery school and three nursing schools. One of the nursing schools was destroyed resulting in the deaths of 150 nursing students and the midwifery school was destroyed (UNPF, 2010). Haiti lacks the healthcare workforce to reduce under five mortality (WHO, 2010a). Haiti has only three healthcare providers per 10,000 people, which is significantly

lower than the World Health Organization established essential level of at least 23 health care providers per 10,000 people (WHO, 2010a).

## Maternal Mortality

Infant health begins with maternal health and maternal survival is vital to infant survival (Anderson et al., 2007; Ronsmans et al., 2010). A study of 144,861 children in Bangladesh assessed the relationship between child mortality up to age 10 and parental mortality (Ronsmans et al., 2010). Paternal mortality did not significantly impact child mortality however, maternal mortality did. When mothers lived until the children were ten years old, the children had an 89% chance of living to age 10, but maternal mortality prior to a child reaching 10 years of age decreased the chance of child survival to 24%. Infants between the two and five months were at highest risk of mortality in the presence of maternal mortality. Discontinuation of breastfeeding following maternal death is believed to be the reason for the dramatic increase risk of mortality among young infants (Ronsmans et al., 2010).

## Maternal Mortality in Haiti

Haitian children are at risk of mortality due to the high rates of maternal mortality. Definitions for maternal mortality, maternal mortality rate, maternal mortality ratio, and lifetime maternal mortality risk are provided on Table 2. No country in the Western hemisphere has a maternal mortality rate worse than Haiti's (UNICEF, 2010a). Haiti has a maternal mortality ratio of 630 maternal deaths per 100,000 live births, which is based on data from 2005 to 2009 (UNICEF, 2010). Additionally, Haitian mothers have a lifetime maternal mortality risk of one in 93 (UNICEF, 2010).

#### Pneumonia

Globally, pneumonia is the number one killer of children less than five years old accounting for 18% of the under-five mortality (Black et al., 2010). Pneumonia was the

most frequent cause of mortality in infants less than six months old in a randomized controlled trial in Zambia of 749 HIV negative infants of HIV positive mothers (Kuhn et al., 2010). Both upper respiratory and lower respiratory infections are less likely in breastfed infants, especially those exclusively breastfed (Bartick & Reinhold, 2010; Duijts et al., 2010).

#### Pneumonia and Pneumonia Care in Haiti

Haitian children lack access to adequate pneumonia care (UNICEF, 2010). In Haiti, between 2005 and 2009, only 31% of children less than five with probable pneumonia were seen by a qualified health care professional. Between, 2005 and 2009, only 3% of children less than five years old in Haiti obtained antibiotics for probable pneumonia (UNICEF, 2010). In a study conducted in the rural Haiti, 45% of the deaths in children less than five were attributed to acute lower respiratory infections (Perry, Ross, & Fernand, 2005).

#### Diarrhea

Globally, diarrhea accounts for 15% of under-five mortality and is the second most frequent cause of under-five mortality (Black et al., 2010). According to another estimate, diarrhea accounts for 19% of the mortality in children under the age of the five each year (Boschi-Pinto, Velebit, & Shibuya, 2008). Some populations may be at even greater risk of diarrhea related mortality. For example, in a randomized controlled trial in Zambia of 749 HIV negative infants of HIV positive mothers, 61.5% of the mortality between ages six to 24 months was attributed to diarrhea (Kuhn et al., 2010).

Breastfeeding has been associated with a decreased risk of diarrhea and death from diarrhea (Bartick & Reinhold, 2010; Duijts, et al., 2010; Kafulafula et al., 2010; Kramer, 2001). Exclusively breastfeed infants have a reduced risk of diarrhea compared to non-exclusively breastfed infants (Diallo et al., 2009; Ukegbu, Ebenebe, & Ukegbu,

2010). Lamberti et al. (2011) found that non-breastfed children five months old and under were 10.52 times more likely to die of diarrhea compared to exclusively breastfed children of the same age.

#### Water and Sanitation

Limited safe water and appropriate sanitation places Haitian children at increased risk of infectious disease and diarrhea (WHO, 2011). In 2008, only 17% of Haitians had access to appropriate sanitation and in rural areas, only 10% had access to appropriate sanitation (UNICEF, 2010). In 2008, 37% of the population did not have access to adequate water (UNICEF, 2010).

## Diarrhea and the Earthquake of 2010

Human conditions including water and sanitation issues became dire after the earthquake of 2010 (UNICEF, 2011). During the fall of 2010, Haiti experienced a cholera epidemic that infected 4722 people and killed over 300 (WHO, 2010b). Over one million Haitians were living in camps 12 months after the earthquake (UNICEF, 2011). Crowded conditions in the camps increased the risk of infectious disease and diarrhea (WHO, 2011).

## Donations of Formula Post Disaster

The donations of infant formula in Haiti post disaster also posed risks to breastfeeding practices and health risks to the population (Gribble, McGrath, MacLaine & Lhotska, 2011; ILCA, 2010; UNICEF, WHO, & WFP, 2010). The donation of formula, after the 2006 earthquake in Indonesia, was shown to significantly impact diarrhea risk and breastfeeding practices (Higrave, Assefa, Winoto, & Sukotjo, 2011). The Indonesian children assessed were 2.12 times more likely to have experienced an episode of diarrhea in the previous week when their caregivers were given donated formula

compared to those children whose caregivers were not given formula donations (Higrave, Assefa, Winoto, & Sukotjo, 2011).

Diarrhea Prevalence, Care, and Mortality in Haiti

Haitian children are at high risk for diarrhea and often lack appropriate care if diarrhea develops (Perez-Escamilla et al., 2009; Walker et al, 2011). In a study in rural Haiti, 21% of the deaths in children less than five were caused by diarrheal illnesses (Perry, Ross, & Fernand, 2005). In a study of 153 mothers of children aged one to five in rural Haiti, 29% of the children had an episode of diarrhea in the two weeks prior to the assessment (Perez-Escamilla et al., 2009). In another assessment in Haiti, Walker et al. (2011) found that among children, who had diarrhea in the two weeks prior to assessment, 40% received oral rehydration, 5% received antibiotics, and none received zinc. "Zinc supplementation reduces the duration and severity of acute and persistent diarrhea" (Bhutta et al., 2000, p. 1516).

#### Physical Growth Issues

Globally significant physical growth issues account for the mortality of 2.2 million children less than five every year (Black et al., 2008). Decreasing the global burden of nutritional issues requires focus on the critical nutritional foundation obtained during gestation and first two years of life (Bryce et al., 2008). Optimal infant feeding described in terms of breastfeeding exclusivity and duration were both significantly related to improved growth defined in terms of weight gain and length (Saha et al., 2008; Ukegbu, et al., 2010). Deviation from exclusive breastfeeding during the first four months of life has also been linked to low weight and inadequate nutrition (Nakamori et al., 2010).

Non breastfed, formula fed six month olds in South Africa with HIV positive mothers were 3.35 times more likely to have a low weight for age and 1.78 times more likely to have a low weight for length compared to breastfed infants (Venkatesh et al.,

2010). Better growth described in terms of weight was noted in breastfed HIV positive children during four months after birth compared to non-breastfed HIV positive children (Patel et al., 2010).

Physical Growth Issues in Haiti

Haitian children are at high risk for growth issues (UNICEF, 2010). Between 2003 and 2009, 29% of Haitian children less than five years old had moderate or severe stunting and 22% were moderately or severely underweight (UNICEF, 2010). In a study of 153 mothers of children aged one to five in rural Haiti, 42.7% of the children had stunting and 18.3% were underweight (Perez-Escamilla et al., 2009). Among the children, only 2% were food secure while 81 % were either very food insecure or severely food insecure (Perez-Escamilla et al., 2009).

### Rationale for Breastfeeding Research in Haiti

Factors influencing the high under five mortality rate, in Haiti are complex but natural disasters such as the earthquake of 2010, the healthcare provider shortage, maternal mortality, pneumonia, diarrhea, and physical growth issues all contribute to the problem. Optimal breastfeeding practices including early breastfeeding initiation and exclusive breastfeeding have the potential to save the lives of 2808 Haitian children under the age of five each year (Jones et al., 2003; UNICEF, 2010). Specifically, breastfeeding is a critical strategy for protecting Haitian children under the age of five from pneumonia, diarrhea, and physical growth issue related mortality (Jones et al., 2003; UNICEF, 2010).

Facilitators of Optimal Timing of Breastfeeding Initiation

In the Community Breastfeeding Network theory, facilitators of breastfeeding include feeding practices and process, closeness, maternal internal resources, and maternal external resources. These facilitator categories guided the data collection,

aimed at describing the facilitators of early breastfeeding initiation. Consistent with the cultural emphasis of ethnographic studies, maternal external resources that include social, cultural, and structural facilitators were the focus of this study. Specific factors known to influence early breastfeeding initiation in other populations helped to guide this study's exploration of the factors that influence the timing of breastfeeding initiation among Haitian mothers.

Process and Practice

#### **Practice**

Haiti has a high breastfeeding initiation rate of 95.7% ranging from 93.5% to 99.7% regionally (WHO, 2009). Artibonite, Haiti has a breastfeeding initiation rate of 96.1% (WHO, 2009). Breastfeeding initiation is necessary, but not sufficient for early breastfeeding to occur. Breastfeeding initiation rates are high in Haiti, therefore, improvement in early breastfeeding initiation rates would not require improvement in breastfeeding initiation rates.

Exclusive breastfeeding has been positively correlated with early breastfeeding initiation (Lunney et al., 2010). Exclusive breastfeeding is defined on Table 1. Exclusive breastfeeding is also suboptimal in Haiti (WHO, 2009). Between 2005 and 2009, 40.6% of Haitian children less than six months of age were breastfed exclusively (WHO, 2009). Early breastfeeding initiation may also be important for the practices influence on other breastfeeding indicators. Understanding timing of breastfeeding initiation needs to be explored within the context of other breastfeeding indictors.

### **Process**

Both mother and child are physiologically ready to begin breastfeeding during the first hour of life. If infants are placed skin to skin with their mothers and other factors have not interfered with the process, infants show highly consistent behavior in terms of

seeking and attaching to the breast (Winberg, 2005). Primitive neonatal reflexes, associated with locating and attaching to the breast and those associated with nutrition transfer provide insight into the infant's contribution to effective breastfeeding (Colson, Meek, & Hawdon, 2008). The consistency of the behavior, which is similar to behaviors found in other mammals, provides support for the notion that this behavior is inborn (Winberg, 2005).

In both a Brazilian study and a Tanzanian study, early breastfeeding initiation occurred significantly more often, in women who had vaginal births (Victor et al., 2013; Vieria et al., 2010). In a Brazilian study, early breastfeeding initiation occurred significantly more often among women who had infants born at term (Vieria et al., 2010). Additionally, early breastfeeding initiation was 3.4 times more likely among Saudi Arabian mothers that did not have breast problems defined as "engorgement, nipple sore and fissures" compared to those who had breast problems (El-Gilany, Sarraf & Al-Wendy, 2012, p. 252).

## Closeness

The physical closeness of mother and child is difficult to separate from the previously described natural process of breastfeeding but warrants being addressed as a distinct facilitator of breastfeeding. Physical closeness between mother and child during the first hour is necessary but not sufficient for early breastfeeding initiation (breastfeeding initiation in the first hour of life) to occur. Conversely, the physical separation of mother and child during the first hour post birth would prevent breastfeeding initiation in the first hour from occurring.

In a randomized controlled trial, skin-to-skin contact between the mother child dyad post birth was associated with an average time from birth to breastfeeding initiation of 40.62 minutes, significantly shorter than the average time from birth to breastfeeding

initiation of 101.88 minutes in the usual care group (Mahmood, Jamal, & Khan, 2011). The skin-to-skin group's average time from birth to breastfeeding initiation of 40.62 is within the first 60 minutes post birth whereas the usual care group's average time from birth to breastfeeding initiation of 101.88 minutes is 41.88 minutes past the first 60 minutes post birth (Mahmood, Jamal, & Khan, 2011). Optimally, breastfeeding initiation should occur within the first 60 minutes after birth termed early breastfeeding initiation (WHO, 2012).

Physical separation of the mother child dyad for maternal employment has been associated with infants not being breastfed and suboptimal breastfeeding (de Onis et al., 2006; Flower et al., 2008; Ladomenou, Kafatost & Galanakis, 2007; Racine, Frick, Guthries & Strobino, 2009). A mother working outside the home has been negatively associated with breastfeeding initiation, exclusivity and duration (de Onis et al., 2006; Flower et al., 2008; Ladomenou, et al., 2007; Racine, et al., 2009). In a study of Tanzanian mothers with children less than two years old, Victor, Baines, Agho, and Dibley (2013) found early breastfeeding initiation was significantly less likely among mothers who were employed during the 12 months prior to the assessment.

## Maternal Internal Resources

Maternal internal resources such as intent, self-efficacy, and maternal mental health are facilitators of breastfeeding that have been linked to breastfeeding practices but not specifically to timing of breastfeeding initiation in the literature assessed (Gregory et al., 2008: Thulier, & Mercer, 2009; Zanardo et al., 2009). Education and experience are potential maternal internal resources. Early breastfeeding initiation was significantly more likely among Tanzanian mothers that were at least 24 years old and mothers that had greater than a primary school education (Victor et al., 2013). Having a parity of two or more was significantly associated with early breastfeeding initiation among Saudi

Arabian women assessed (El-Gilany, Sarraf & Al-Wendy, 2012). Any assessment of maternal internal resources in Haiti needs to be culturally appropriate and made with the awareness that the concept of self, personal strengths and self-determination may differ from the perspectives presented in current breastfeeding literature.

#### Maternal External Resources

Maternal external resources include social and cultural influences as well as structural influences such as that of governments and healthcare systems. Beyond statistics of four breastfeeding indicators (breastfeeding initiation, early breastfeeding initiation, exclusive breastfeeding and breastfeeding duration), only one peer-reviewed article related to Haitian breastfeeding practices and beliefs was identified. In a study of 153 mothers of children, aged one to five in rural Haiti, 19% did not breastfeed colostrum (Perez-Escamilla et al., 2009). Rationale for their child not being fed colostrum, presented in descending order from that of highest frequency included "not good for the child", "to prevent the child from getting sick", "it is not our family habit to do so" and "the child did not want it"(Perez-Escamilla et al., 2009, p. 2135). Early breastfeeding initiation could not have occurred if colostrum was not given. Early breastfeeding initiation, however, does not always result from the giving of colostrum because colostrum may be given for the first time after the first hour after birth. The findings reported by Perez-Escamilla et al. (2009) and the World Health Organization breastfeeding indicators are consistent with this notion although the aggregate data sets are compared with great caution and awareness of the limitations.

Haiti's early breastfeeding initiation rates range from 30% to 55.4% regionally therefore early breastfeeding initiation did not occur in 44.6% to 70% (WHO, 2009). If the participants in the Perez-Escamilla et al. (2009) study are generalizable to Haitian mothers, the 19% of mothers who did not give colostrum would not explain the 44.6 to

70% that early breastfeeding initiation did not occur. Additionally, factors other than not giving colostrum have been associated with the timing of breastfeeding initiation in other populations.

El-Gilany, Sarraf and Al-Wendy (2012) found the absence of prelacteal feeds to be significantly associated with early breastfeeding initiation. A definition of prelacteal feed is provided on Table 3. Mothers were 13.7 times more likely to breastfeed during the first hour of life when prelacteal feedings were not given (Gilany, Sarraf & Al-Wendy, 2012).

In a Brazilian study, early breastfeeding initiation occurred significantly more often in women who had been given breastfeeding education prenatally (Vieria et al., 2010). In other populations, prenatal care has been associated with early breastfeeding initiation and exclusive breastfeeding (Agho et al., 2011; Kupratakul, Taneepanichskul, Voramongkol, & Vorapong, 2010; Ogunlesi, 2010). Between 2005 and 2009, only 54% of Haitian mothers had four or more prenatal visits (UNICEF, 2010). Giving birth in a health facility has been significantly associated with early breastfeeding initiation (Gerbaba, Belachew & Setegn, 2011; Ogunlesi, 2010) A quarter of Haitian mothers give birth in hospitals or clinics and 26% have a skilled birth attendant present when giving birth (UNICEF, 2010). Only 6% have access to a skilled birth attendant when the poorest fifth of the Haitian population is assessed (UNICEF, 2010).

Because 74% of Haitian mothers and 94% of the poorest Haitian mothers do not have skilled birth attendants present at birth, assessment of influence of traditional birth attendants on breastfeeding practices in Haiti would be essential (UNICEF, 2010).

Traditional birth attendants have been shown to influence breastfeeding practices in other settings (Thatte et al., 2009; Victor et al., 2013). Early breastfeeding initiation was significantly less likely among Tanzanian mothers who had an unskilled birth attendant

such as a traditional birth attendant (Victor et al., 2013). Researchers described that traditional birth attendants encouraged mothers to provide supplemental (non breast milk) feedings and to avoid giving colostrum in a study of traditional birth attendants in Nepal (Thatte et al., 2009).

## Summary

Despite the potential for breastfeeding to reduce under five mortality, limited information regarding breastfeeding practices in Haiti is available, especially in terms of current, peer reviewed literature. Data on the breastfeeding indicators of breastfeeding initiation, early breastfeeding initiation, breastfeeding exclusivity, and median breastfeeding duration are available for Haiti (WHO, 2009). As previously described, Haiti has a high breastfeeding initiation rate and low rates of both early breastfeeding initiation and breastfeeding exclusivity (WHO, 2009).

Although the rates of early breastfeeding initiation (breastfeeding initiation in the first hour of life) are known for Haiti, the specific timing of breastfeeding initiation (length of the delay from birth to breastfeeding initiation) is not reported in any of the databases or peer review literature assessed. The specific timing of breastfeeding initiation provide context to the early breastfeeding initiation data and would be essential for the development of an intervention to improve early breastfeeding initiation rates in Haiti.

Development and testing of community specific interventions to improve early breastfeeding initiation in Haiti should be a goal of future research since early breastfeeding initiation is associated with multiple child health benefits including mortality reduction. Foundational research including identification of factors that influence the timing of breastfeeding initiation among Haitian mothers is needed prior to the development and testing of interventions to improve early breastfeeding initiation in Haiti. Limited published studies have described factors that influence the timing of

breastfeeding initiation. Published studies have not adequately described the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices and this study aimed to address that specific gap in the literature.

### Chapter 3

### Methods and Procedures

## Introduction

A focused ethnography aimed at describing the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices was conducted in Artibonite, Haiti. Details of the study design, sample, setting, data collection methods, and procedures will be discussed. Ethical considerations, data analysis and study delimitations will also be addressed.

## Research Design

The PI conducted a focused ethnography using semi-structured interviews, participant observation, and cultural artifacts to describe the factors that influence the timing of breastfeeding initiation among women in rural Haiti. Consistent with ethnographic methods, this study occurred in a natural setting because the nuances of culture and personal interaction would have been lost in a controlled environment (Murchison, 2010).

Ethnography was an ideal research methodology to describe the cultural beliefs, cultural practices, and related factors that influence the timing of breastfeeding initiation among Haitian mothers for multiple reasons. Cultural understanding is the central focus of ethnography (LeCompte & Schensul, 2010). Ethnography is compatible with a single researcher study (Munhall, 2012). Additionally, nurse researchers have successfully used ethnographic methods including a focused ethnography by Flood and Dogson (2010) on breastfeeding in Hawaii.

The PI planned for recruitment and data collection to occur within a one to threeweek period. Actual recruitment and data collection was completed within a period of 14 days with interviews occurring on 6 of the 14 days in the field. The data collection period was consistent with typical data collection range of "three days to six week" for focused ethnographies (LeCompte & Schensul, 2010 p 115). Traditional ethnography requires the researchers to immerse themselves in the culture for a minimum of a year (Sanday, 1979). Focused ethnography reduced the time investment and cost thereby, improving the feasibility of conducting the study (Munhall, 2012).

In a focused ethnography, the researcher's previous knowledge of the culture of interest and proficiency in the native language are recommended to effectively overcome the challenges of the shortened data collection (LeCompte & Schensul, 2010). The PI is proficient in Haitian Creole and previously spent a year living in Haiti. Additionally, a focused ethnography needs to be narrow in scope, addressing a singular component of the culture (LeCompte & Schensul, 2010). This study was very narrow in focus, assessing timing of breastfeeding initiation, a specific aspect of breastfeeding.

### Sample

#### Inclusion and Exclusion Criteria

The target sample consisted of Haitian mothers living in rural Haiti, with children less than 12 months old. The study sample consisted of mothers who meet the inclusion criteria and who self-selected to participate. The potential participants had to be Haitian born, adult (18 years or older), mothers living in Artibonite, Haiti who had given birth to a live child in the 12 months prior to data collection. The child born in the last 12 months did not have to be alive at the time of data collection for the mother to be eligible. Mothers had to be able speak and understand verbal Haitian Creole and consent to participate. Understanding of verbal Haitian Creole, rather than written Creole, was used so that the sample would not be biased based on literacy. This consideration was crucial for the representativeness of the sample since only 49% of Haitian adults are literate (World Bank, 2011). Mothers who were acutely ill or caring for a family member who is acutely ill

were excluded. Mothers who had a neurological, cognitive, or psychological disorder preventing recall were also excluded.

## Adult mothers

The PI limited the study sample to adult mothers 18 years or older. The age of majority is 18 in Haiti (CIA, 2012). Including mothers less than 18 would have required assent of the mother and then consent by a parent/guardian of the mother. Gaining access to the parent/ guardian of the mother could have been problematic and the compressed data collection timeline in this focused ethnography reduced the feasibility of such an approach.

#### Live birth

The PI limited the study sample to mothers who had given birth to a live child within 12 months prior to data collection. If a child was not alive at birth, the child would not have had the opportunity to initiate breastfeeding therefore a description of factors related to the timing of breastfeeding initiation could not have been developed.

Additionally, exclusion of mothers who had a child who died had the potential to limit the recruitment of mothers who did not breastfeeding during the first hour of life because not breastfeeding in the first hour of life increases the risk of neonatal mortality (Edmond et al., 2006; Mullany et al., 2008).

## Mothers with children less than 12 months

The PI limited the study to mothers with children less than 12 months. Multiple examples of researchers selecting mothers with children less than 24 months as study participants to assess breastfeeding practices was found in current literature (Mihrshahi et al, 2010; Pandey et al., 2010; Senarath et al., 2010). Mothers who had given birth to a child in the 12 months prior to data collection would likely have better recall of the child's birth and timing of breastfeeding initiation compared to mothers who had given birth over

one year ago. Including mothers with children less than 12 months, instead of mothers of younger children allows for greater probability of adequate recruitment during the compressed data collection period. Additionally, children less than 12 months are likely to still be breastfed since Haiti's breastfeeding initiation rate of 95.7% and the median duration of breastfeeding is 18.8 months and Artibonite, Haiti's breastfeeding initiation rate of 96.1% and the median duration of breastfeeding is 19.3 months (WHO, 2009).

#### Artibonite

The PI limited the study to mothers recruited from a selected town in Artibonite Haiti. A hospital exists in the selected town which allowed for potential recruitment of mothers that received hospital based prenatal care and births as well as mothers that had home based births. The geographic landscape and limited transportation infrastructure make travel difficult in the recruitment area. Transportation is limited to foot in many areas within Artibonite. The sample has to be accessible or the potential benefits or flaws of a sampling technique are irrelevant. The sample type from a pragmatic perspective enhanced validity. Self-selection is an acknowledged threat to this and any other design but accepting all who qualified helped to reduce bias. The potential that mothers from the selected town in Artibonite, Haiti are not representative of mothers from this or other regions in Haiti exists. Since Artibonite has the lowest early breastfeeding rate in all of Haiti (WHO, 2009), the focus is on gaining knowledge of early breastfeeding initiation in Artibonite rather than generalizability to all Haitian regions. The goal was to describe early breastfeeding initiation in a discrete, logistically feasible location in order to develop and test an appropriate intervention to improve early breastfeeding initiation in a future study. Methods could be replicated within other regions in Haiti in the future. Ultimately, the sample represented the population of interest.

### Minimum sampling

A minimum sample of 20 participants was set for recruitment. Specific recommendations for optimal sample size are elusive in ethnography but a recently published focused ethnography on breastfeeding by Flood and Dogson (2010) used 20 participants and was the guide for minimum sampling. Recruitment continued until data saturation was reached with a total of 25 participants.

## Setting

Haiti

Haiti, the country commonly referred to as, the poorest country in the Western Hemisphere is located in the Caribbean on the island of Hispaniola (WHO/PAHO, 2010). Haiti covers 27,750 square kilometers, which is similar to the size of the state of Maryland in the United States (CIA, 2012). Haiti only has 4,160 km of roads and approximate one forth (1011 km) of the roads are paved (CIA, 2012). Mountains are characteristic of Haiti's topography (CIA, 2012). The land has widespread deforestation and erosion problems (CIA, 2012).

Haiti is a nation of approximately 9.8 million individuals (CIA, 2012). Haiti has only three healthcare providers per 10,000 people, which is significantly lower than the World Health Organization established essential level of at least 23 health care providers per 10,000 people (WHO, 2010a). According to UNICEF (2010b) "Haiti has the highest rates of infant, under-five and maternal mortality in the Western hemisphere."

### Rural Haiti

This study took place in rural Haiti. Globally, children living in rural areas are more likely to die before the age of five (WHO, 2013d.). Basic healthcare is not available to 60% of Haitians, predominately Haitians living in rural settings (UNICEF, 2010a). Rural homes typically lack plumbing and electricity (WHO/PAHO, 2010). "In rural Haiti, the

family is organized around the lakou (courtyard), in which clusters of extended family units form an interdependent community sharing a common courtyard" (WHO/PAHO, 2010, p. 4). Family is not confined to biological relations in Haitian culture and includes friends within one's social network (WHO/PAHO, 2010).

#### Artibonite

Haiti is divided into 10 departments or regions (CIA, 2012). This study was conducted in a rural area within the Artibonite region of Haiti. Artibonite is located in the northwest of Haiti (United Nations [UN], 2008). Artibonite has an early breastfeeding initiation rate of 30%, the lowest of all Haitian regions (WHO, 2009) and is, therefore, the Haitian region with the most critical need for assessment of the factors influencing the timing of breastfeeding initiation. The PI previously spent a year living in Artibonite and developed personal relationships in the community and knowledge of the area that were essential for conducting a focused ethnographic study.

## **Data Collection Method**

The researcher is the research instrument in ethnography (Murchison, 2010). Each culture and researcher is unique and complex which makes the methodological process of each ethnography distinctive (Mead, 1933). The use of mixed methods is typical in ethnographic studies and is necessary to develop a comprehensive depiction of a phenomenon of inquiry, in this case, timing of breastfeeding initiation in rural Haiti (LeCompte & Schensul, 2013). The selected data collection methods of interviews, participant observation, and cultural artifacts are well-established methods of gaining cultural knowledge in ethnography (Spradley, 1979).

### Sampling

Convenience sampling and subsequent snowball sampling was used concurrent with data collection. Convenience sampling was mediated through four community

gatekeepers known to the PI. The use of gatekeepers residing within four villages in the town selected as the recruitment site helped with the identification of eligible participants and with the establishment of rapport with participants. Community based rather than hospital recruitment was also used as a means of not biasing the sample towards mothers who sought health care. Convenience sampling and snowball sampling provided the best opportunity for adequate recruitment and addressed the challenges of conducting research in a remote area in a developing country.

The PI developed the recruitment plan to be appropriate for the culture. Haitians tend to be present oriented, focused on day-to-day survival and may lack access to methods of tracking time such as watches and calendars (Freeman, 2001). Access to phones, televisions, and computers is also very limited. Investment in future oriented, time specific, or technology-based recruitment strategies would be culturally inappropriate in rural Haiti and may waste time and resources.

For each participant, recruitment, data collection, and debriefing occurred on the same day. The debriefing will be discussed related to ethical considerations. Data collection typically occurred at participants' homes. For a few participants data collection occurred at the home of another participant, and for one participant data collection occurred at the home where the PI was staying within the community. All interview, observation, and artifact data were collected by the PI, which aided with the consistency of data collection.

### Interviews

Semi- structured interviews were conducted and audio recorded with all participants. The interviews occurred on six different days during the 14 days of data collection in the field. The interviews lasted approximately 25 to 40 minutes. A digital

recorder was used to yield a recording of each interview. Of the 25 interviews, 24 of the recordings were audible. The one recording that was not audible was for Mother 17.

The interviews occurred at the participant's home, or another site selected by the participant. To reduce the potential influence of social desirability in participants' responses, the PI remained neutral to participant responses during the interview. The wording and progression of the interview questions were developed in a culturally appropriate way based on the PI's experience with participant population. The interview schedule is presented in Appendix A. An English version of the interview schedule is presented along with the Haitian Creole for the purpose of review although the interviews were only conducted in the participants' native language of Haitian Creole.

The semi-structured interviews consisted of open and close-ended questions. All of the close-ended questions were intentionally structured as close-ended questions in order for the responses to be assessed quantitatively. The facilitators of breastfeeding in the Community Breastfeeding Network Theory, which include process and practice, closeness, and maternal internal resources and maternal external resources guided the interview questions aimed at describing facilitators of early breastfeeding initiation.

Consistent with the cultural emphasis of ethnographic studies, maternal external resources that include social, cultural, and structural facilitators were the focus of the interview questions. Demographic data were also collected as part of the semi-structured interviews conducted with all participants.

A typed interview schedule was used to aid with the consistence of the semistructured interviews. The PI hand wrote participants responses to each question during the interview. Selected quotes and observations were also captured by the PI on the interview schedule.

#### Observations

Observations of maternal child interactions, breastfeeding, social interactions, home or community environment assessment occurred during each participant interview which lasted approximately 25 to 40 minutes. When necessary observations extend past the interview, but the observations did not exceed more than 30 minutes of the participants' time beyond the interview. In addition to observations captured on the interview schedule notes, a separate observation form was used for each of the participant. Observations of related public behavior also occurred but only in conjunction with the previously described observation of participants.

Ideally, the PI would have observed the participants during the first hour post birth but observation during that time period was not attempted due to feasibility issues identified prior to data collection. Only a quarter of Haitian mothers give birth in hospitals or clinics (UNICEF, 2010). Within the one to three weeks of anticipated data collection, the PI may not have had access to an adequate number of participants during and immediately after birth because of the remote location and unstructured system of community based childbirth care.

The PI is a certified nurse midwife and knowledgeable of the benefits of early breastfeeding initiation. The PI would likely have been the only skilled birth attendant present at any observed birth since 74% of Haitian mothers and 94% of the poorest Haitian mothers do not have skilled birth attendants present at their births (UNICEF, 2010). As a result, being present during a birth the PI would likely have had to abandon the observer role to intervene with situations related to early breastfeeding initiation or other potentially lifesaving care that ethically could not be ignored.

Observation of participants' breastfeeding their infants was anticipated because Haiti has a high breastfeeding initiation rate of 95.7% and the median duration of

breastfeeding is 18.8 months and in Artibonite, Haiti the breastfeeding initiation rate is 96.1% and the median duration of breastfeeding is 19.3 months (WHO, 2009).

Observation of participants' breastfeeding their child provided context to the specific breastfeeding practice, timing of breastfeeding initiation. Whenever possible the participants' birth setting was also observed.

Observations were recorded on an observation form that included the participant identification number, observation date, observation length, observation location as well as detailed observations of the participant, setting and related public behavior. An observation form was completed for each participant for a total of 25 observation forms completed.

#### Artifacts

Artifacts relevant to the timing of breastfeeding initiation were identified, described in the PI's field notes. Whenever possible the artifacts were also captured in photographic form by the PI. Potential artifacts included vessels used for infant supplementation, and types of liquid/ solids used for supplementation, water sources, items used in preparation of supplements. Materials used for wrapping, clothing, or placement of the baby in the first hour postpartum were also potential artifacts. The interviews and observations provided guidance for the identification of actual artifacts related to the timing of breastfeeding initiation.

Each artifact relevant to the timing of breastfeeding initiation was described in detail by the PI's field notes. When possible photographs were taken with a digital camera to capture cultural artifacts. The photographs of cultural artifacts allowed for physical documentation of each artifact.

#### Fieldnotes

Field notes consisted of a combination of both structured and unstructured field notes. Structured fieldnotes were used to improve the consistency and completeness of the PI's field notes. For the structured fieldnotes, the PI created the structured fieldnote form based on the "nine major dimensions of every social situation" presented in classic work of Spradley (1980, p. 78) which encompasses the dimensions of "space", "actor", "activity", "object", "act", "event", "time", "goal" and "feeling." The "nine major dimensions of every social situation" are defined on Table 4 and will be discussed in detail in the analysis of study data (Spradley 1980, p. 78). Field notes were completed on each of the 14 days in the field from June 7, 2013 to June 20, 2013. Eleven structured field notes and 27 unstructured field notes were completed, yielding a total of 38 field notes over the course of 2 weeks of data collection.

Table 4 Spradley (1980) nine dimensions

| "Nine major dimensions of every social | Dimension definitions                       |
|--|---|
| situation" (Spradley 1980, p. 78).     |   |
| Space                                  | "the physical place or places" (Spradley    |
|  | 1980, p. 78).                               |
| Actor                                  | "the people involved" (Spradley 1980,       |
|  | p.78).                                      |
| Time                                   | "the sequencing that takes place over       |
|  | time" (Spradley 1980, p. 78).               |
| Act                                    | "single actions that people do"(Spradley    |
|  | 1980, p. 78).                               |
| Activity                               | "a set of related acts people do" (Spradley |
|  | 1980, p. 78).                               |
| Object                                 | "the physical things that are present"      |
|  | (Spradley 1980, p. 78).                     |
| Feeling                                | "the emotions felt and expressed"           |
|  | (Spradley 1980, p. 78).                     |
| Goal                                   | "the things people are trying to            |
|  | accomplish" (Spradley 1980, p. 78).         |
| Event                                  | "a set of related activities that people    |
|  | carry out" (Spradley 1980, p. 78).          |

## **Ethical Considerations**

The University of Texas at Arlington (UTA) Institutional Review Board (IRB) approved this study prior to study initiation. The PI implemented informed consent

procedures for any potential participant that met the eligibility criteria and expressed desire to participate in the study. The IRB approved an alteration informed consent procedures which included the consent form being read by the PI rather than participants and verbal consent rather than signature be obtained by participants. The PI read the consent form verbatim to each potential participant in her native language of Haitian Creole. Informed consent information was conducted verbally in the local language of Haitian Creole to eliminate potential language and literacy barriers to obtaining a true informed consent. For review purposes, the consent form is presented in both English and Haitian Creole in Appendix B.

A waiver of written consent served to protect the confidentiality of each participant. Participant names were not collected or used for any study documentation. A participant identification number, rather than participant name, was used to protect confidentiality. A consent form would be the only source of identifying data and therefore would pose the greatest risk for breach of confidentiality. The PI signed each consent form verifying that informed consent had been obtained.

Although no patient identifiers were collected, procedures to insure the security of the data were still used. The security measures helped to ensure that complete data was available for analysis and a complete audit trail would be available for review to ensure rigor. Study documents contained participant identification number only and not the participant's name. Study data, audio tapes, and camera were locked in a backpack when not in use during the 14 days of data collection in Haiti. After data collection was complete, all written data, audio tapes, and memory cards from the digital camera were transported in a locked backpack to a locked cabinet. Final repository of the data will be at the Center for Nursing Research at the PI's institution. All study data was entered or uploaded into a password protected computer files. Only the PI and members of the

researcher's dissertation committee who had been trained in human subjects' protection had access to the data.

Participants were given a scarf valued at approximately 6.50 USD that is traditionally used as a hair wrap and known locally by the study population as a "mouchwa" to compensate them for their time. In a recent study conducted in Haiti, participants were given an item valued at 5.00 USD for compensation for their time (Sloand, Gebrian, Astone, 2012). The use of a "mouchwa" as compensation was well received by participants. Monetary compensation was not used because any amount of money could be potentially coercive since 76% percent of the Haitian population has an annual income of less than 734 US dollars and 56% of Haitians has an annual income less than 365 US dollars (UN WFP, 2011).

No physical risks from participation in this study existed. A remote, but plausible, risk of emotional distress or fatigue from questioning existed, but the PI told participants verbally in their native language of Haitian Creole that they could stop at any time without any negative consequence. The PI carried a cell phone with global access at all times during the 14 days of data collection in Haiti so that if any adverse events or psychological distress of subjects occurred, the issue could have been reported to the UTA IRB in a timely manner.

Knowledge of the factors which influence the timing of breastfeeding initiation in rural Haiti has the potential for enormous benefit if the data are used to create and test culturally appropriate interventions to improve early breastfeeding initiation rates in future studies. Early breastfeeding initiation is potentially lifesaving for future infants born in the research community and the PI cannot ethically withhold such knowledge from participants. Therefore, the PI debriefed each study participant after data collection was compiled for an individual study participant. In the debriefing, the PI told participants

about the importance of breastfeeding in the first hour of life to reduce infants' chance of death. The PI also provided an opportunity for the participants to ask questions about optimal breastfeeding practices.

### Data Analyses

#### Ethnography

Regardless of the type of ethnography chosen by the researcher, the emic perspective is central to the philosophical basis of ethnography (Holloway, 2008). Emic is an inside point of view (Murchison, 2010). The belief that people can place themselves in another person's situation, in order to gain the point of view of that person is key to ethnographic philosophy and methodology (Savage, 2000).

The theory of symbolic interactionism is closely connected with the study of cultures (Spradley, 1979). In symbolic interactionism, things have significance and personal behavior associated with those things is rooted in such significance (Blumer, 1969; Spradley, 1979). Personal interaction within an individual's culture is the source of significance of things. Culture is a lens through which an individual takes in and modifies the significance of the things they have contact with (Blumer, 1969; Spradley, 1979). Ethnography is based on the philosophic assumption that cultural knowledge can be gained through language, actions and materials used by members of the culture (Spradley, 1979).

Modern ethnographers have rejected previous ethnocentric beliefs and have embraced a view that acknowledges the complexity of individuals and cultural phenomenon (Murchison, 2010). The assumption that culture and human interaction is contextual and needs to be studied as the phenomenon happens has remained constant in ethnography (Robertson & Boyle, 1984).

## Quantitative data preparation and analysis

Descriptive statistics were used to describe the demographic characteristics of the sample. Descriptive statistics were also used to describe the measures of central tendency and measure of dispersion for the participants' self-reported timing of breastfeeding initiation. The prevalence (frequency) of early breastfeeding initiation for the overall sample was calculated. The previously described statistics along with other frequencies that were computed for the sample are displayed on Table 6 and throughout the narrative. Frequencies stratified by the presence or absence of early breastfeeding initiation were done for descriptive purposes rather than to demonstrate significance.

All quantitative data was hand entered into an Excel database. The Excel database was printed and compared for accuracy against the original data. Once accuracy was confirmed all statistical analysis was performed using Excel. As previously described, the descriptive statistics that were used to analyze the data in Excel are presented on Table 6 and throughout the narrative.

## Qualitative data preparation and analysis

Initial data analysis using the interview schedules, observation notes and field notes which included artifact notes occurred concurrently with data collection. The "nine major dimensions of every social situation" from classic work of Spradley (1980, p. 78) and presented on Table 4 were used to guide analysis. The nine dimensions were chosen as a means of creating a complete description of the phenomenon of timing of breastfeeding initiation. Patterns in each of the 9 dimensions were identified from the data. As a novice researcher, the PI chose a means of identifying patterns in ethnographic research described by LeCompte and Schensul (2013) to help ensure the completeness of data analysis. The data was analyzed for "declaration", "frequency",

"omission", "similarity", "co-occurrence", "sequence" and "A priori hypothesizing" (LeCompte & Schensul, 2013, p.248-249) to identify patterns.

After data collection was complete, field notes were typed. Hand written data from interview schedules were typed and translated when necessary. The hand written data was then compared to the audio recordings of the interviews to ensure accuracy. Interviews were transcribed word for word in Creole on the same typed interview schedule forms. The transcribed interviews were then translated into English. Analytic memos were done on the transcribed interviews and typed field notes. Further pattern analysis was conducted using the previously described techniques. Representative participant quotes were identified. Vignettes that aided with the description of timing of breastfeeding initiation in rural Haiti were also selected.

## Rigor

The PI used multiple well-established strategies to ensure rigor including reflexivity, an audit trail, development of a thick description and triangulation (Creswell & Miller, 2000). The PI developed understanding of how she influenced the research conducted and how the research influenced her (Munhall, 2012; Pellatt, 2003). The PI will disclose the reflective understanding in any research writings. The PI will also be transparent in any disseminated research findings about how her race, native language, and country of origin differ from the study participants. Study participants were all Black, Haitian born women with a native language of Haitian Creole. In contrast, the PI is a White, American born woman with a native language of English and a secondary language of Haitian Creole.

The use of structured field note forms, audio recording of interviews, and photographing of artifacts helped to create an audit trail and ensure that the data was collected consistency. Physical documentation of data collected and the analysis process

known as audit trail provide evidence for how the PI arrived at the study results from study data (Creswell & Miller, 2000). The audit trail consists of analytic memos and documented analysis as well as the photographs, field notes, and hand written memos and will be maintained. Enough detail of the data collection and analysis process are contained in the audit trail that another researcher could replicate the process (LeCompte & Goetz, 1982).

Integration of quantitative and qualitative data

Triangulation of the quantitative and qualitative study data was done through recursive analysis. Recursive analysis is the fluid movement between qualitative and quantitative data for data integration and synthesis (LeCompte & Schensul, 2013). Any irresolvable discrepancies in the study data would have been formulated into questions to be addressed in futures studies, however, no such discrepancies were identified. A thick description was created from the integration of both the quantitative and qualitative data. The reader should be able to reconstruct the phenomenon of the timing of breastfeeding initiation from the thick description, which includes direct quotes from the participants (Fetterman, 2010; Murchison, 2010). The PI will disseminate the research findings and use the findings to guide future research related to the timing of breastfeeding initiation in Haiti.

## **Delimitations**

The study sample consisted of adult mothers18 years or older because the age of majority is 18 in Haiti (CIA, 2012). Obtaining consent from a parent/guardian for mothers less than 18 years old may not have been feasible with the compressed data collection in this study. Mothers who have given birth to a live child within previous 12 months were recruited as a means of balancing the need for adequate recruitment in a compressed period with the likelihood of maternal recall of the timing of breastfeeding

initiation and factors that influenced the timing of breastfeeding initiation. The mothers were recruited from a selected town in rural Artibonite, Haiti.

## **Chapter Summary**

A focused ethnography was conducted using semi-structured interviews, participant observation, and cultural artifacts to assess the factors that influence the timing of breastfeeding initiation among women in rural Haiti. This study was conducted in a rural area within the Artibonite region of Haiti. Artibonite has an early breastfeeding initiation rate of 30%, the lowest of all Haitian regions (WHO, 2009). A sample of 25 Haitian mothers living in rural Haiti with children less than 12 months old was obtained through convenience and snowball sampling. The study protocol was carefully developed to help ensure the study was conducted in an ethical and culturally appropriate manner. A thick description of the timing of breastfeeding initiation in rural Haiti was created from the integration of both the quantitative and qualitative data that was collected.

### Chapter 4

## **Findings**

#### Introduction

A focused ethnography was conducted in Artibonite, Haiti, aimed at describing the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices. Details of the sample characteristics will be discussed. The specific timing of breastfeeding initiation among the participants and the identified factors that influence breastfeeding initiation will be described in detail. Spurious results will also be addressed. The thick description will be presented in the first person and participants will be referred to as mothers because of the intimacy of community based interviews.

## Thick Description

The phenomenon of breastfeeding initiation with specific focus of the timing of the event is captured by a thick description developed through the integration of qualitative and quantitative data. Early breastfeeding initiation (breastfeeding initiation in the first hour of life) occurred with 16 (64%) of the sample and delayed breastfeeding initiation occurred with the remaining 9 (36%) of the sample. Self-reported timing of breastfeeding initiation ranged from 10 minutes to 24 hours post birth among the 23 (92%) participants that were able to quantify the specific timing of breastfeeding initiation in minutes or hours.

The focus of this study was timing of breastfeeding initiation but birth practices, other breastfeeding practices, and greater societal issues were interwoven because timing of breastfeeding initiation could not be described in isolation. The thick description was structured based on the "nine major dimensions of every social situation" from the classic work of Spradley (1980, p. 78) which are defined on Table 4. The separation of

some of the nine dimensions is for descriptive purposes and clarification but the PI acknowledges the interconnectedness of the nine dimensions. An overview the study findings structured based on Spradley (1980) dimensions and linked backed to the Community Breastfeeding Network theory is presented on Table 5.

Table 5 Overview of study findings

| "Nine major<br>dimensions of every<br>social situation"<br>(Spradley 1980, p.<br>78). | Timing of breastfeeding initiation findings   | Link to Community Breastfeeding Network theory facilitator categories | Link to Community Breastfeeding Network theory level |
|---|---|---|--|
| Space   | Homes Greater community Hospital Breastfeeding initiation   | Process and Practice<br>Maternal external<br>resources                | Mother child dyad Family Community                   |
| Actor   | Mother child dyad<br>Birth attendant<br>Others present at the<br>birth  | Process and Practice<br>Closeness<br>Maternal internal<br>resources   | Mother child<br>dyad<br>Family                       |
|   | Sources of breastfeeding information  | Maternal external resources   | Community  |
| Time  | Quantifying timing of breastfeeding initiation  | Process and Practice<br>Closeness<br>Maternal internal                | Mother child<br>dyad                                 |
|   | Timing and sequencing   | Maternal external resources   | Family Community                                     |
| Act   | Breastfeeding information   | Process and Practice<br>Closeness<br>Maternal internal                | Mother child<br>dyad                                 |
|   | Cutting the umbilical cord Drying baby Washing baby Clothing baby Wrapping baby Addressing postpartum health issues of the baby | resources  Maternal external resources                                | Family  Community                                    |

Table 5 - continued

|          | Birth of the placenta Addressing postpartum health issues of the mother Cleaning of the breasts  Skin to skin Holding Breastfeeding attempt Breastfeeding initiation |   |                                    |
|----------|--|---|------------------------------------|
| Activity | Breastfeeding information  Baby care  Mother care  | Process and Practice Closeness Maternal internal resources  Maternal external resources | Mother child dyad Family Community |
|          | Closeness of the dyad  |   |                                    |
| Object   | Baby care<br>Cleaning of the<br>breasts  | Process and Practice<br>Closeness<br>Maternal external<br>resources                     | Mother child<br>dyad<br>Family     |
|          | Initiating breastfeeding   |   | Community                          |
| Feeling  | Comfort breastfeeding Breastfeeding initiation Timing of   | Process and Practice<br>Closeness<br>Maternal internal<br>resources                     | Mother child<br>dyad<br>Family     |
|          | breastfeeding initiation Breastfeeding healthy for babies Attachment   | Maternal external resources   | Community                          |
| Goal     | Breast initiation Timing of breastfeeding initiation   | Process and Practice<br>Closeness<br>Maternal internal<br>resources                     | Mother child dyad Family           |
|          | Baby's health and wellbeing  | Maternal external resources   | Community                          |
| Front    | Attachment   | Drooped on d Droot's  | Mothorshild                        |
| Event    | Early breastfeeding initiation vignettes   | Process and Practice Closeness  | Mother child dyad                  |

Table 5 - continued

| Delayed<br>breastfeeding | Maternal internal resources | Family    |
|--------------------------|-----------------------------|-----------|
| initiation vignettes     | Maternal external resources | Community |

Space

"Vin chita" Come sit

During every interview, I sat often as mothers and others present squatted or stood. A social custom of offering a chair or place to sit to visitors was extended to me as a sign of welcome. Often I was given the only chair for the household. See Figure 3 for a photograph of a typical chair. When no chair was available another provision was provided to me. Several times I sat on the mother's bed alongside her. In the case of Mothers 19 and 20, I was given a plastic bucket placed with the open end on the dirt ground with the closed end draped with a piece of cloth taken freshly off the clothesline to create a seat.



Figure 3 Chair

#### Homes

All homes assessed lacked electricity and running water. Most homes had concrete floors but a few had dirt floors. The homes ranged in size from 1 to 3 rooms with a range of 3 to 15 people living in the homes. An average of 4.94 people per room were living in the homes. A lack of privacy was noted during most interviews. Mothers did not vocalize or show nonverbal signs of discomfort by the interruptions and lack of private space during interviews.

Homes were dark with an open door the only source of light during interviews.

The air was hot and stagnant due to the tropical climate and lack of air flow in the enclosed quarters. The buzzing sound of mosquitos warned of the inevitable bites that would follow. See Figure 4 for a photograph of a typical home.



Figure 4 Home

## Greater community

Mothers were intentionally assessed within the community within which they live.

Artibonite is located in the North Western area of Haiti. The town where data collection occurred was intentionally undisclosed for protection of the mothers as well as the people

and institutions discussed by the mothers. The town's topography was mountainous with rivers present as depicted in the photograph presented in Figure 5.



Figure 5 River and mountains

For 17 (68%) participants, the river was the source of "dlo pwòp" literally translated as clean water, but more accurately identified as water used for drinking. The water was not potable due to the contamination of the water source. Some of the mothers who used river water as drinking water reported treating the water with bleach but Mothers 14 and 15 expressed that they had nothing to treat the water with. See Figure 6 for a photograph of river water.



Figure 6 River water

A vibrant local market was particularly active on Wednesdays within the town. A variety of local produce, meats, commercially prepared foods, hygiene items, clothes and shoes were available at the market. See Figures 7, 8, and 9 for photographs of the market.



Figure 7 Market



Figure 8 Market commercially prepared items



Figure 9 Market produce

# Hospital

The town where data collection occurred also had a hospital which provided services such as prenatal care and maternity services. An operating room was also available. Mothers lived in four distinct villages within the town. All mothers had physical access to the hospital, meaning they lived within the same town as the hospital and were within walking distance to the hospital. Mothers 13 through 21 lived in the village directly behind the hospital and, therefore, had the most proximate access to the hospital.

Although all mothers had access to the hospital in terms of physical proximity, multiple barriers to accessing skilled care at the hospital were identified. The expense of hospital based care and difficulty traveling, particularly during labor were described as barriers to giving birth in the hospital. Some mothers had to travel through thick vegetation and pass a river to get to the hospital. One of the gatekeepers, cut through the vegetation with a machete and guided me through banana trees to reach the mothers in his village. See Figures 10 and 11 for photographs of the thick vegetation and banana trees. During and after rainfall, the streets and paths used for transportation by foot or other means became muddy and sometimes flooded, making travel very difficult. The difficulty of travelling in such conditions was experienced during data collection. See Figure 12 for photograph of a muddy trail.



Figure 10 Thick vegetation



Figure 11 Banana trees



Figure 12 Muddy trail

Beliefs regarding the normalcy of pregnancy and birth as well as the view that the hospital was a place to go when sick prevented some from accessing skilled care at the hospital. For example, Mother 13 stated she gave birth at the hospital "paske malad" meaning because she was sick. Mothers 19 and 21 stated they would have gone to the hospital if there had been a problem. In contrast, Mother 24 who gave birth to her previous child at home without incident gave birth at the hospital for her most recent birth because the hospital provided her with "plis sekirite" (greater security).

A formal assessment of the hospital birth site was not conducted. Due to the small number of hospital based births (7) and the use of self-report, findings may not have reflected typical hospital practices. I was in contact with a member of the board of directors of the hospital which the mothers referred to when discussing prenatal care and hospital based births. The hospital will be given a report for their use to aid with the

improvement of hospital and community level care. Mother 15 was the only exception to the local hospital being the hospital of reference for mothers. Mother 15 attended prenatal care three times at another hospital located in the closest major city but gave birth at home.

#### Breastfeeding initiation

The physical space for breastfeeding initiation was the same general physical space as the birth site regardless of the timing of breastfeeding initiation. Breastfeeding initiation was described quite literally as occurring in "menm kote," the same place as the birth, by a few participants. Breastfeeding initiation occurred at home among the 18 (72%) mothers who gave birth at home and breastfeeding initiation occurred at the hospital among the 7 (28%) mothers that gave birth at the hospital.

The location within either the home or hospital typically changed from birth to breastfeeding initiation for the mothers. Mother 25, for example, gave birth in the "lakou," a courtyard outside her home and initiated breastfeeding lying on the bed in her one room home. Mother 23 described how breastfeeding initiation occurred "apre mwen monte kabann" meaning after climbing into bed. See Figures 13 and 14 for photographs of maternal beds. The movement from a floor-based birth position to the bed to hold the infant and initiate breastfeeding was commonly reported among mothers with home based births. Similarly, Mother 1, who gave birth at the hospital described how she moved to another room to lie down after giving birth prior to holding her baby and initiating breastfeeding.



Figure 13 Bed without netting



Figure 14 Bed with netting

# Actor

# Mother Child Dyad

The mother and newborn child were the essential actors in the phenomenon that is breastfeeding initiation, as expected prior to data collection. Breastfeeding initiation necessitated the physical contact between both mother and child, therefore, the mother child dyad was identified as the unit of analysis and referred to as a dyad because they were a single unit in utero and within the breastfeeding relationship. The mother child

dyad was closest to the phenomenon of interest but the mother is the only verbal person in the mother child dyad capable of being interviewed. Mothers were also selected as a means of identifying other potential actors involved in the timing of breastfeeding initiation among the sample.

The final sample consisted of 25 Haitian born mothers living within the same town in Artibonite, Haiti, with living children less than 12 months of age. The 25 mothers had a total of 26 children in their most recent births since Mother 18 gave birth to twins. The statistics for child age was based on a total of 26 children. All other statistics were calculated for 25 mothers unless a subsample is specifically defined otherwise. Detailed demographic characteristics of the sample are presented on Table 6.

Table 6 Demographic Characteristics of Haitian Born Mothers (N=25)

| Characteristic                 | Description                  |
|--------------------------------|------------------------------|
| Maternal age                   | M=28.56 years (SD=7.2)       |
|                                | Range 19 years to 43 years   |
| Child age                      | M=4.52 months (SD=2.10)      |
|                                | Range 0.5 months to 8 months |
| Parity                         | M= 3.48 births (SD=2.68)     |
|                                | Range 1 birth to 13 births   |
| People living in maternal home | M=8 people (SD=3.65)         |
|                                | Range 3 to 15 people         |
| Rooms in maternal home         | M=1.96 rooms (SD=0.98)       |
|                                | Range 1 to 4 rooms           |
| Maternal schooling             | M= 4.20 years (SD=3.69)      |
|                                | Range 0 to 13 years          |

All mothers were born within the region of Artibonite, Haiti. All mothers lived within the selected town in Artibonite at the time of data collection. Their children from

their most recent births were also born in the same selected town. All of the mothers had vaginal births and all but one birth was reported to be at term. All of the children were eight months or less with 14 (53.8%) younger than six months and 12 (46.2%) six months or older. Five mothers (20%) had never attended school and 20 (80%) had attended school for at least one year. Early breastfeeding initiation occurred with 2 (40.0%) of mothers with no previous school attendance and early breastfeeding initiation occurred with 14 (70.0%) of mothers that had one or more years of school attendance.

Beliefs regarding breastfeeding and breast milk were overwhelmingly positive and very homogenous among the mothers. Beliefs of the mothers will be discussed in greater detail under the dimension "feeling." The beliefs expressed by mothers were consistent with the post birth actions of the mothers.

All 25 of the mothers reported that they, the mothers, were the ones who decided when the baby was breastfed for the first time. A total of 24 (96%) mothers reported that they attempted to initiate breastfeeding when they first held their child. The one mother, Mother 2 that did not attempt to initiate breastfeeding at the timing of first holding, reported only a brief delay to clean her breasts before initiating breastfeeding during the first hour after birth.

Most of the mothers (n=24, 96%) successfully initiated breastfeeding with first breastfeeding attempt. The only exception, Mother 19 attempted to initiate breastfeeding but was not able to initiate breastfeeding because the baby's inability to latch. The specifics of Mother 19's situation will be discussed in detail in the events.

Timing of breastfeeding was influenced when certain health issues were present for the mother, the child or both after birth. Delayed breastfeeding initiation occurred with both infants that had respiratory problems. Delayed breastfeeding initiation occurred with Mother 13 that had pregnancy-induced hypertension and postpartum hemorrhage.

Mother 13 reported her baby was born fast and suffered a broken clavicle. Early breastfeeding initiation did occur, however, with both mother child dyads who had fevers after birth.

#### Birth Attendant

The birth attendant was a key actor related to timing of breastfeeding initiation.

Only mothers who had hospital births had skilled birth attendants as defined by WHO (2004). For seven (28%) mothers who gave birth in the hospital, the skilled birth attendant was a nurse. A "matwòn" midwife attended 16 (64%) participant births. Two (8%) participants had a female birth attendant, an aunt and a neighbor, neither of whom had prior experience attending births. Early breastfeeding initiation occurred with 2 (28.6%) of the births attended by a nurse, 13 (81.3%) attended by a midwife, and 1 (50%) of the births attended by a birth attendant without prior experience attending births.

The midwives or "matwon yo" were traditional birth attendants and were not professional midwives. The phrase "gen bwat" literally translated to mean "have box" was used to describe a trained midwife. Midwives in the region who complete training through a hospital or other organization have traditionally been given a box for their birthing supplies which was the origin of the phrase "gen bwat". A midwife could have received formal training without having a physical box and a midwife could have obtained a box from another source without receiving training. The phrase "gen bwat" was the best phrase for obtaining knowledge of midwife training despite the potential limitations of the phrase. Among the 16 mothers that had a midwife attend their birth 2 (12.5%) "gen bwat" had received training, 2 (12.5%) participants were unsure if their midwife had received training, and 12 (75%) mothers stated their midwife "pa gen bwat" had not received training.

Early breastfeeding initiation occurred at 10 minutes and 15 minutes post birth respectively for participants 17 and 23 who had a trained midwife attend their birth.

Mother 23 stated she initiated breastfeeding when she did because her midwife, along with her sister, told her breastfeeding right after the baby is born was good for the baby. Additionally Mother 23 stated she would have sought help from her midwife if she had had problems with breastfeeding.

Choice of birth attendant was closely related to choice of birth setting among participants. Mothers giving birth at the hospital chose the birth setting of the hospital but the birth attendants, a nurse in all seven cases, were the birth attendant available at the hospital rather than a selected birth attendant. Although mothers that gave birth at home sometimes selected a birth attendant prior to the birth, several mothers described a female relative searching for a midwife after labor began.

The birth attendant is typically in charge of baby care after birth with 23 (92%) mothers reporting their birth attendant provided care to their baby after birth and prior to them as mothers being given their babies to hold. The birth attendant, or individual in charge of baby care, controlled the time of separation, from birth to physical contact between mother and newborn child, described by mothers as the first holding. In the case of Mother 18 who gave birth to twins in the hospital, another nurse other than the nurse who attended the birth provided care to both babies after birth.

#### Those present at Birth

Family, particularly female relatives such as mothers, sisters, aunts, mothers-in-law, sisters-in-law are typically present at the birth. Mother 15, reported that she would "pito" (rather give birth at home) because "tout fanmi mwen se isit" (all my family is here). Female neighbors and friends were sometimes present at the births. Those present at the birth that were present during participant interviews often provided detailed

information about the birth and timing of breastfeeding initiation that triggered mothers' memories.

Females present at the birth played at least three roles related to the births. Some were the birth attendants. Some were the ones that chose or found the birth attendant and others directly influenced the timing of breastfeeding initiation. Mother 3's untrained midwife was her mother. Mother 12 had her aunt who had no prior experience attending births attend her birth. Mother 5's sister-in-law went to find a midwife for her. The sister of participant 16 found a midwife that was close by for her. The midwife Mother 21 wanted to attend her birth was not available so Mother 21's sister found another midwife.

Family members present at Mother 14's birth were involved in the separation of mother and child and subsequent seven hour delay in breastfeeding initiation which will be described in detail in "events". Mother 4's mother was present at her birth and was also her source of information on timing of breastfeeding.

# Sources of Breastfeeding Information

The conversations with mothers provided insight into the complexity of trusted information. The nuances of who mothers trusted to provide them with health information related to pregnancy, birth, breastfeeding and baby care would have been lost if only quantitative data were collected. Mothers often included qualifying statements about who they would trust.

Nurses providing prenatal care were identified as a source of breastfeeding information. Nurses were identified as the most trusted source of information with 23 (92%) mothers stating they would believe information presented by a nurse about pregnancy, birth, breastfeeding or baby care. Doctors were also highly trusted with 22

(88%) mothers reporting they would believe information presented by a doctor about pregnancy, birth, breastfeeding or baby care.

For Mother 4, a 21 year old who gave birth to her second baby at home, her mother was a source of information regarding timing of breastfeeding initiation. Mother 4 breastfeed during the first hour after birth, her mother had told her it was good to breastfeed right after the baby was born. During the course of the interview, she often deferred to her mother. Prompting was necessary on multiple occasions for Mother 4 to answer questions for herself.

Mother 4 reported she would believe her mother if her mother gave her health information related to pregnancy, birth, breastfeeding or baby care, however, 12 (48%) participants reported they would not believe their mother. Mother 23 described why she would believe a nurse or trained midwife over her mother. "Li te fè pitit deja men moun ki gen gran fòmasyon pou bagay gen plis konpreyansyon." The sentence can be interpreted that her mother has had children already but people who have large amounts of training for something have greater understanding.

The gate keeper who identified seven mothers was an informal leader in her community. The gatekeeper was the source of breastfeeding information for Mother 12 and Mother 12 referred to the gatekeeper as a friend. This friend was described as providing information and encouragement that highly influenced Mother 12's decision to optimally breastfeed in terms of early breastfeeding initiation and exclusive breastfeeding. Mother 12 was one of only 5 (20%) of mothers that both breastfeed during the first hour of life and did not supplement prematurely. Although Mother 12's friend was an important source of breastfeeding information, 18 (72%) mothers reported they would not trust a friend that provided them with information related to pregnancy, birth, breastfeeding or

baby care. For mother 20, believing a friend "depann ki zanmi e sa yo di," depends on which friend and what they said.

The radio was a source of breastfeeding information for Mother 21. Slogans for public health campaigns to promote breastfeeding were integrated into the language mothers used. Mothers were asked about the traditional Haitian proverb "lèt manman se pi bon pase tout lèt" which translated means a mother's milk is better than all milk. Four (16%) mothers responded with the phrase used in public health campaigns "lèt manman se richès tibebe a," mothers milk is a baby's wealth, or parts of the phrase "se richès tibebe" or "se richès."

Among the mothers 19 (76%) received prenatal care and 7 (28%) gave birth at the hospital. A total of 5 (20%) of the sample did not receive prenatal care and did not give birth at the hospital and therefore did not have direct contact with skilled care for their pregnancy or at birth.

Some mothers identified a lack of resources and breastfeeding information.

Approximately a quarter of mothers stated they would not know who to ask for help if their baby had problems breastfeeding. About half of mothers said they had not been told anything about ideal timing of breastfeeding initiation from any source. Six (37.5%) of the 16 participants with early breastfeeding initiation had not been told anything about ideal timing of breastfeeding initiation had not been told anything about ideal timing of breastfeeding initiation from any source compared to 6 (66.7%) of the 9 participants with delayed breastfeeding initiation.

Mother 10 who first breastfed at two hours after birth stated "mwen pa gen moun ki bay mwen enfòmasyon" I do not have people that give me information. Early breastfeeding initiation occurred 30 minutes after birth for Mother 11 who stated "nan lopital te di se bon bay tete pandan premye lè apre akouchman an." (In the hospital they said it is good to breastfeed during the first hour after birth.) Although Mother 11 reported

being given information specifically about breastfeeding during the first hour after birth, other mothers reported information in term of breastfeeding after the baby is "fenk te fèt" just born. Mothers did not interpret breastfeeding after the baby is "fenk te fèt" just born as the equivalent to breastfeeding during the first hour after birth.

Time

Quantifying timing of breastfeeding initiation

All the mothers were able to identify whether breastfeeding initiation occurred during the first hour post birth or later. Early breastfeeding initiation (breastfeeding initiation in the first hour of life) occurred with 16 (64%) mothers and delayed breastfeeding initiation occurred with the remaining 9 (36%) mothers. The specific self-reported timing of breastfeeding initiation results are presented on Table 7.

Table 7 Specific timing of breastfeeding initiation

| Mothers able to quantify specific timing of  | 23 (92%)                     |
|--|------------------------------|
| breastfeeding initiation in minutes or       |                              |
| hours  |                              |
| Specific timing of breastfeeding initiation  | M=2.33 hours (SD=5.03)       |
| n=23   | Range 10 minutes- 24 hours   |
| Mothers early breastfeeding initiation able  | 14 (87.5%)                   |
| to quantify specific timing of breastfeeding |                              |
| initiation in minutes n=16                   |                              |
| Specific timing of early breastfeeding       | M=0.35 hours (SD=0.19)       |
| initiation n=14                              | Range 10 minutes- 50 minutes |
| Mothers delayed breastfeeding initiation     | 9 (100%)                     |
| able to quantify in minutes or hours n=9     |                              |

Table 7 - continued

| Specific timing of delayed breastfeeding | M=5.42 hours (SD=7.21)                       |
|--|--|
| initiation n=9                           | Range 1.25-24 hours                          |
|  | Actual time delay: 1.25, 1.5, 2, 2, 3, 3, 5, |
|  | 7, and 24 hours                              |
|  | 7, and 24 hours                              |

A specific quantifiable time of breastfeeding initiation was not obtained for 2 (8%) participants which included, Mother 2 and Mother 4. Both Mothers 2 and 4 were easily able to identify that breastfeeding occurred within the first hour. Although 23 (92%) mothers reported the specific timing of breastfeeding initiation in minutes or hours, this specific timing information was often obtained only after prompting. Mothers often replied with more general descriptions of the timing of breastfeeding initiation before being prompted for a more specific time. For example, Mother 1 initially responded that breastfeeding initiation occurred "jou li fèt" the day she was born. When prompted to provide a specific time she replied 3 hours after birth. Mother 10 initially responded "menm jou" the same day, referring to the day of the birth and then when prompted to provide a specific time replied 2 hours after birth. Mother 12 initially replied "apre li fenk te fèt" after (the baby) was just born and when prompted about specific time responded 30 minutes after birth.

Mothers easily identified if breastfeeding initiation occurred during the first hour after birth or not but the specific timing of breastfeeding initiation was more difficult for participants to recall. The specific timing of breastfeeding initiation was easier to ascertain when early breastfeeding initiation occurred after the first hour. The difference in recalling the specific timing of breastfeeding between those who breastfeed during the first hour and those that did not may relate to the specificity of the answers provided based on the timing. The mothers who breastfed their baby in the first hour, 14 out of 16

mothers were able to quantify the specific time reported the timing of breastfeeding initiation in minutes. In contrast, all 9 mothers with delayed breastfeeding initiation were able to quantify a specific timing of breastfeeding initiation and 7 out of the 9 mothers reported the specific timing of breastfeeding initiation in hours the remaining two reported the timing in minutes.

#### Timing and sequencing

Timing and sequencing of events from birth to first holding were difficult to ascertain from participants since the activities they described were typically carried out by the birth attendant rather than by themselves. The sequencing the mothers were able to discuss with great clarity were the acts in which they were directly involved, holding the baby and initiating breastfeeding. Although holding of the baby precedes breastfeeding initiation, the two activities are described as occurring simultaneously. A total of 23 (92%) mothers describe the timing of first holding as the time of breastfeeding initiation.

# Act, Activity and Object

# Breastfeeding information

Breastfeeding information came in multiple forms from verbal messages vicarious learning and intrinsic knowledge. As previously described information regarding the timing of breastfeeding came from sources such as nurses, family and friends as well as community level sources such as the radio. Mothers had knowledge and beliefs that breastfeeding and breast milk were good for their babies. Although knowledge of the health value of breastfeeding was commonplace, 12 (48%) mothers had not been told anything about ideal timing of breastfeeding initiation from any source.

# **Baby Care**

The activity of baby care included acts such as cutting the umbilical cord, drying, washing, clothing, wrapping, and addressing postpartum health issues of the baby.

Typically baby care which was accomplished in a timeframe which allowed for first holding and first breastfeeding to occur within an hour of birth. For Mothers 1, 10, and 24 typical baby care was extended beyond an hour and the first holding and first breastfeeding was subsequently delayed beyond an hour.

Mother 19 described "nòmalman se moun ki fè akouchman ki fè swen tibebe a" normally the person that attends the birth does the baby care. The mothers were not always aware of what baby care activities occurred since those acts were typically performed by the birth attendant. For example, Mother 1 knew that the nurse put on the baby's diaper but reported she "pa konnen lòt bagay li te fè" didn't know what other things she did. Based on mothers knowledge of baby care activities, drying the baby occurred with 5 (20%), washing the baby occurred with 5 (20%) clothing the baby occurred with 24 (96%) and wrapping the baby occurred with 23 (92%) births prior to mother's first holding of the child.

Baby care necessitated the use of physical objects. Cloth or towels are used to dry the newborn baby. Baby clothes are placed on the baby. A cloth or towel is used to wrap the baby. The cloth, towels, blankets, and clothes used observed and described varied in style and type. The materials were the provisions available rather than specific items procured. Most of the materials were cotton or cotton like materials. Despite the tropical climate, some infants were observed to be wrapped with thick layer of clothe from a towel, blanket or other cloth. Refer to Figures 15 and 16 for photographs of infants clothed and wrapped. The baby clothes and the towel or cloth for wrapping create a material barrier which prevents skin to skin contact between the mother and child.



Figure 15 Infant clothed



Figure 16 Infant clothed and wrapped

# **Mother Care**

Mother care included acts related to the birth of the placenta, addressing postpartum health issues and cleaning of the breasts. Care of the baby was the focus of mothers' description of the events during the first hour rather than, their own personal care. A few of the mothers discussed the birth of placenta. The "tranche" contractions

associated with expulsion of the placenta was described in the sequencing of events related to timing of breastfeeding initiation for one mother. Mother 25, who waited an hour for the birth of her placenta discussed her personal care in relation to third stage of labor and timing of breastfeeding initiation.

Maternal postpartum health issues varied in severity and included issues such as not feeling well, pregnancy induced hypertension and postpartum hemorrhage. Mother 18 who gave birth to twins reported that she "santi malad" felt sick after the birth of her child which prevented her from being able to hold her infants until they were 90 minutes old. Postpartum health issues of the mother were addressed by the birth attendant if addressed at all.

The act of cleaning the breasts prior to initiating breastfeeding was reported by 5 (20%) of participants. All five of the mothers that reported breast cleaning prior to breastfeeding initiation performed breast cleaning themselves. Mother 10 demonstrated how she took a towel that was "byen pwòp" good and clean to clean her breasts by using multiple downward stokes covering the breast surface. The demonstration of breast cleaning took less than a minute to complete. Cleaning of the breasts prior to breastfeeding initiation required the use of either a towel or cloth. The materials used to clean the breasts were described as being "byen pwòp" good and clean. The cloth or towel used for cleaning breasts was dry and no water was used.

Among the five mothers that reported cleaning their breasts prior to initiating breastfeeding early breastfeeding initiation occurred with 4 (80%). Mother 10 was the only participant that reported cleaning her breasts prior to breastfeeding initiation to also report delayed breastfeeding initiation. Routine baby care by the midwife delayed first holding and breastfeeding initiation until 2 hours after birth for Mother 10. Breast

cleaning occurred prior to Mother 10 holding her infant and did not extend the delay beyond the two hour maternal child separation for baby care.

# Closeness of the dyad

Post birth activities that brought physical closeness between the mother child dyad included skin to skin contact, holding, breastfeeding initiation attempts and successful breastfeeding initiation. Placement of the newborn child skin to skin by the midwife right after birth occurred with Mother 2. Mother 2 was the only participant that reported no time delay between birth and first holding. Mother 2 described the fluid movement of baby being born and the midwife placing baby directly on her bare chest. Cleaning of the breasts was the only action of the mother done prior to latching infant to her breast. No other activities by mother or midwife were described as occurring prior to breastfeeding initiation.

Physical contact between the mother and child in the form of holding is a key act related to timing of breastfeeding initiation with 24 (96%) mothers identifying the timing of first holding as the time of first breastfeeding attempt. A total of 23 (92%) participants successfully initiated breastfeeding at the time of first holding.

Mother 3 described and demonstrated how she placed her clothed child now 1.5 months across her arm on a towel and drew her into her breast with a single motion of her arm to initiate breastfeeding. None of the mothers described a physical object which was necessary for them to initiate breastfeeding. Likewise, during observed breastfeeding sessions between mother child dyads during data collection, no physical objects were used for breastfeeding. No physical materials were used to position baby at the breast and no physical materials were used to cover the mother's breasts during breastfeeding.

A total of 24 (96%) participants reported that their child had no problems breastfeeding the first time they attempted to initiate breastfeeding. See Figure 17 for photograph of infant breastfeeding. Mothers described how the baby was able to "pran fasil" easily take the breast which would most likely be described as infant latching well or easily in English. The child of Mother 19 that did not initiate breastfeeding with first breastfeeding attempt had respiratory issues after birth which will be discussed in detail related to events.



Figure 17 Infant breastfeeding

Feeling and Goal

Comfort Breastfeeding

A high level of comfort with breastfeeding and a view that breastfeeding is the normative infant feeding method was conveyed through all three data sources of interviews, observations and artifacts. Mothers openly discussed and actively engaged in discussions about breastfeeding. Even in the presence of other males and females,

mothers showed verbal or physical signs of comfort discussing breastfeeding. Mothers breastfed their children in response to baby's cues during interviews. Mothers freely breastfed without covering up their breasts. Mothers appeared comfortable breastfeeding in front of me and others, male or female present during interviews.

Mother 21, displayed multitasking while breastfeeding. She latched infant while continuing to answer interview questions and drank a glass of water with her free hand. A few mothers discussed "mwen te konnen pou kont mwen" I knew it for myself, the intrinsic knowledge that breastfeeding is good for babies. Lack of physical materials needed to breastfeed also reinforced comfort with breastfeeding as well as a normative view of breastfeeding.

# Breastfeeding initiation

Breastfeeding initiation was a universal practice among mothers with all 25 (100%) mothers initiating breastfeeding and all 25 (100%) currently breastfeeding their children that ranged in age from .5 to 8 months. The mothers were not preselected based on breastfeeding initiation and current breastfeeding practices, as those breastfeeding indicators were not elicited until after recruitment when the participant was interviewed.

# Timing of Breastfeeding initiation

Timing of breastfeeding initiation was not a priority of focus for mothers. Timing of breastfeeding initiation was more often described in terms of a natural occurrence when postpartum events allowed for holding of their infant rather than their intent to initiate breastfeeding at a specific time. Although several mothers discussed breastfeeding after the baby was "fenk te fèt" just born because they knew it was good for the baby that was not equivalent to breastfeeding initiation during the hour after birth for all mothers assessed.

### Breastfeeding healthy for babies

Mothers felt that breastfeeding is good for babies. All 25 (100%) mothers believed that colostrum was good for babies' health and all 25 (100%) mature breast milk was good for babies' health as well. Mothers' value providing health benefits to baby. Participant 2 described that "lèt manman se bon pou timoun yo" mothers' milk is good for children.

In response to the Haitian proverb "lèt manman se pi bon pase tout lèt" mother's milk is better than all milk participants provided affirmation of their belief that breastfeeding is beneficial and good for baby's health. Breastfeeding "li ede sante tibebe a" it helps a baby's health Mother 5 stated. Mother 24 smiled and stated "wi, se vre" yes, that is true. Other mothers including Mother 10 responded with "kwè sa" believe that.

# Baby Health and Wellbeing

The health and wellbeing of the infant was a priority of mothers as was doing what was best for their infants. A willingness to change breastfeeding beliefs and behaviors when presented with information about the value of specific breastfeeding practices for the baby's health. Baby care appears to be the focus of the first hour post birth. Mothers' own personal care was notably absent from the description of events during the first hour provided by most mothers.

Specific information about exclusive breastfeeding among sample will be discussed related to additional results. Mothers that exclusively breastfed their infants during the first 6 months of life often described choosing to exclusively breastfeed for the health of the infant. Non-exclusive breastfeeding is a risk to the child's health but the mother's motivation for premature supplementation was often an attempt to meet the child's needs with 9 (75%) of the 12 participants that supplemented prior to six months of life reporting they supplemented due to infant crying.

#### Attachment

The feeling of attachment is closely connected to the previously described maternal goal of health and wellbeing of the baby. The attachment of mother to child was observed and described by responsiveness to baby's needs, protectiveness and concern for wellbeing as well as physical and emotional connectedness.

Mother 16 described "li te kriye, mwen te bay tete" (the baby) cried, I breastfed. Similarly, Mother 2 first breastfed when she did "paske li kriye" because (the baby) cried. Mothers responding to infant cues such as crying by breastfeeding, calming words and gentle touch was repeatedly observed during interviews.

The physical proximity between the mother child dyad took many forms. Most infants were held by their mothers during the course of the interview. The only exceptions to infants being held were when they were asleep and Mother 18 who held one twin while her friend held her other twin. Only 3 (12%) mothers were employed since the birth of their child. Mother 12, a merchant that sells small items such as crackers outside her home was observed holding her infant while working prior to her interview. All 25 (100%) mothers reported cosleeping with their infants.

The attachment between mother and child was also observed by the emotional weight of the death of previous children. Mother 25 for example had three previous children die when they were very "piti" little. Mother 25's grief shown through her tear filled eyes and the enormity of her pain was palpable in the room as we discussed her losses.

Event

Early breastfeeding initiation vignettes

A total of 16 (64%) successfully initiated breastfeeding during the first hour after birth. All 16 of the mothers that successfully initiated breastfeeding during the first hour

held their infant during the first hour. The events described by Mothers 17, 21, and 22 provide vignettes of the experiences of mothers that successfully initiated breastfeeding during the first hour of life. Details varied among the 16 (64%) of mothers that successfully initiated breastfeeding. The goal of the vignettes of Mothers 17, 21, and 22 is to provide actual examples of events leading to early breastfeeding initiation and not to oversimplify factors that influence successful early breastfeeding initiation.

Mother 17 is a 22 year old that gave birth to her first child at home with a midwife that "gen bwat," had training. Mother 17 attended five prenatal visits at the hospital. After the birth, the umbilical cord was cut and the baby was clothed and wrapped by the midwife which took 10 minutes to complete. Mother 17 first held her infant 10 minutes after birth at which time she successfully initiated breastfeeding. She reported first breastfeeding at that time because she had been told to breastfeed right after the baby was born at the hospital. Subsequently she knew breastfeeding right after the baby was born was good for the baby. Neither mother nor newborn child had postpartum health issues.

Mother 22 is a 28 year old who gave birth to her fifth at home with a midwife that "pa gen bwat" was untrained. She attended two prenatal visits at the hospital. After the birth, the midwife dried, clothed and wrapped the baby which took 15 minutes. Mother 22 successfully initiated breastfeeding 15 minutes after birth when infant was first held. She reported breastfeeding at the time because the hospital told her breastfeeding after birth was good for the baby. Additionally she stated the baby cried and breastfeeding calms the baby.

Mother 21, initiated breastfeeding in the first hour of life and her description provides an example of how information in the form of education and experience can change both beliefs and behaviors. Additionally Mother 21 is one of 5 (20%) of

participants that optimally breastfeeding practices, including early breastfeeding initiation, exclusive breastfeeding during the first six months of life and current breastfeeding.

Mother 21 is a 34 year old that gave birth to her first baby at home attended by a midwife. Her baby was dried, clothed and wrapped by the midwife. Infant was first held at 30 minutes after birth when the midwife completed baby care. Breastfeeding initiation occurred 30 minutes after birth when infant was first held.

Mother 21 stated she would have thrown out her "lèt jòn" literally translated yellow milk referring to colostrum thinking the colostrum was bad for the baby. She knew from the hospital and the radio that "premye lèt" first milk referring to colostrum was good for babies and she breastfed as soon as she held her child. She stated "mwen te chwazi paske te di premye lèt se richès." I chose (to initiate breastfeeding then) because (they) said first milk is (the baby's) wealth. She described how colostrum was "fòtifyan" fortified. Mother 21 also knew a baby girl that was given "lèt bwat" literally translated as boxed milk referring to infant formula. The girl became very sick and ended up hospitalized. Witnessing the child's illness also helped to convince participant 21 to exclusively breastfeed her own child who was 3 months of age at the time of assessment.

Delayed breastfeeding initiation vignettes

The events that lead to delayed breastfeeding initiation were more divergent than the events that lead to early breastfeeding initiation. Three (12%) of the total 25 participants (33%) of the 9 mothers that reported a delay of more than an hour described the delay in terms of routine baby care. Mother 1 is a 26 year old who gave birth to her third child in the hospital attended by a nurse had a three hour delay prior to breastfeeding initiation. The three hour delay prior to first holding was due to routine baby care and mother initiated breastfeeding when baby was held for the first time three hours after birth.

Mother 24 is a 33 year old that gave birth to her second baby at the hospital attended by a nurse. The description provided by participant 24 is very similar to that of participant 1. Mother 24 describe a delay of 3 hours prior to initiation due to routine baby care by the nurse and breastfeeding initiation occurring at hour 3 post birth with first holding.

Mother 10 is a 36 year old who gave birth to her fifth child at home attended by a midwife. She did not receive prenatal care. She reported not having received information about timing of breastfeeding initiation from any source. She stated "Mwen pa gen moun ki bay mwen enfòmasyon." I do not have people that give me information. After birth she cleaned her breasts prior to holding her infant with a "sèvyèt pwòp" clean towel. Mother 10 first held her baby 2 hours when breastfeeding initiation occurred. She reported the 2 hour delay in breastfeeding initiation was due to routine baby care which included clothing and wrapping the baby.

Mother 8 is a 27 year old who gave birth to her third baby at home attended by a midwife. She attended four prenatal visits at the hospital and had "tansyon wo" high blood pressure during her pregnancy. The baby was born prematurely at 7 months gestation. The mother's other previous two children were also born preterm and her second child died a day after birth. The baby "respire ba" had depressed or weak breathing after birth. The midwife attended to the baby who was not breathing well. In addition to assessing the infant's breathing, the midwife clothed and wrapped the infant before giving the mother the infant to hold at two hours post birth. Breastfeeding initiation occurred two hours after birth. The infant was taken to the hospital a day after birth due to continued respiratory problems which subsequently resolved.

Mother 19 is a 21 year old who gave birth to her first baby at the hospital attended by a nurse. Her baby was washed, clothed and wrapped by the nurse prior to

being given to her to hold 30 minutes after birth. She attempted to initiate breastfeeding when she first held her baby but the baby could not "pran tete" take the breast. The baby had difficulty breathing after birth and the mother attributed the breastfeeding difficulties to the baby's breathing issues. The nurses at the hospital assisted the mother with breastfeeding. She successful initiated breastfeeding "lè li kap pran tete" when (the baby) could take the breast 24 hours after birth. The baby was breastfeeding well at three days of age, when the mother was discharged from the hospital.

Mother 13 is a 41 year old who gave birth to her fifth baby at the hospital attended by a nurse. She attended two prenatal visits and she gave birth at the hospital "paske malad" because (she) was sick. The mother had "tansyon wo" high blood pressure and "pye anfle" swollen feet. The baby was born fast and suffered a broken clavicle. After the birth, the mother "senyen twòp" bleed too much. The postpartum hemorrhage was identified by Mother 13 as the main reason for the delay in holding her infant. Breastfeeding initiation was delayed until 5 hours after birth and occurred with the mother's first holding of the infant.

Mother 25 is a 37 year old who gave birth to her fifth baby at home attended by a neighbor. Mother 25 gave birth outside in the "lakou" courtyard outside her home. The neighbor who assisted with the birth provided care to the baby while Mother 25 waited an hour for the placenta to be born. After the placenta was born, about 15 minutes passed before Mother 25 came into her home and laid in bed to hold her baby. Breastfeeding initiation occurred one hour and 15 minutes after the birth with first holding of the infant.

Mother 18 is a 31 year old who gave birth for the third time to her twin babies at the hospital attended by a nurse. She attended prenatal care at the hospital seven times. She gave birth at the hospital because she was told by the doctor that she was "twò gwo" too big and a possibility of a twin birth existed. A nurse other than the birth attendant

provided baby care which included washing, clothing and wrapping the two babies. The nurse performed baby care for 60 minutes. Mother 18 had the opportunity to hold her infants 60 minutes after birth when the nurse finished baby care. She opted to have the infant held by "lòt moun" another person for an additional 30 minutes. The mother reported "Lè mwen te fin akouche. Mwen malad, mwen pa nòmal." "When I finished giving birth... I (was) sick, I was not normal. "Kenbe lè santi pi bon" Held (the baby) when (she) felt better. The mother first held infant at 1.5 hours post birth and successfully initiated breastfeeding with both babies at that time.

Mother 14 is a 21 year old who gave birth to her first baby at home attended by a midwife. Her mother, sister and "anpil moun" many people were present at the birth. After the birth the baby was "rele doulè" crying in pain. The family took the baby to the hospital while mom stayed at home. The hospital staff told the family that the baby was fine.

Mother 14 initiated breastfeeding seven hours after the birth when her family returned from the hospital with her baby.

Study Questions

Factors influencing timing of breastfeeding initiation

The primary study question was, what are the factors, primarily the cultural beliefs and practices that influence the timing of breastfeeding initiation among Haitian mothers? Mothers described baby care by birth attendants as well as actual and perceived health issues of the mother and child as some of the key factors influencing timing of breastfeeding initiation.

Self-reported timing of breastfeeding initiation

The secondary study question was when do Haitian mothers first breastfeed their children (self-reported timing of breastfeeding initiation)? The specific self-reported timing of breastfeeding initiation ranged from 10 minutes after birth to 24 hours after birth

(M=2.33 hours, SD=5.03) among the 23 participants able to quantify the specific time of breastfeeding initiation. All 25 participants were able to describe if breastfeeding initiation occurred during the first hour of life or after the first hour. Early breastfeeding initiation (breastfeeding initiation in the first hour of life) occurred with 16 (64%) mothers and delayed breastfeeding initiation occurred with the remaining 9 (36%) mothers.

#### Additional results

# Exclusive breastfeeding

Suboptimal breastfeeding practices among the sample extended beyond delayed breastfeeding initiation and included non-exclusive breastfeeding. Non-exclusive breastfeeding was common among participants with 6 (42.85%) of the 14 participants with a child less than 6 months reporting they had supplemented with non-breast milk food or liquid and 6 (54.54%) of the 11 participants with a child 6 months or older reporting they supplemented prior to 6 months. Among the 14 mothers with children less than 6 months that had supplemented the mean time of supplementation was 2.13 months and ranged from .75 to 3 months. Among the 11 mothers with children 6 months or older that reported supplementing prior to 6 months the mean time of supplementation was 1.5 months with a range of 1 to 3 months. Prelacteal feeding, supplementation of non-breast milk food or liquid prior to breastfeeding initiation, however, was reported by none (0%) of the mothers.

#### Breastfeeding education

The need for breastfeeding related education beyond early breastfeeding initiation and exclusive breastfeeding was identified during data collection. Mothers asked unsolicited questions about breastfeeding to the PI during their interviews or interviews of other participants which highlighted several educational needs. Mother 8 had questions about breastfeeding her child born preterm at 7 months gestation. One mother wanted to

know if breastfeeding if she became sick was okay, as she had concerns her milk would "vire move " turn bad if she was sick. Another mother asked about the relationship between breastfeeding and return of menstruation and fertility.

# **Chapter Summary**

A focused ethnography was conducted in Artibonite, Haiti, aimed at describing the factors affecting the timing of breastfeeding initiation among Haitian mothers, particularly the specific cultural beliefs and practices. The phenomenon of breastfeeding initiation with specific focus of the timing of the event was captured by a thick description developed through the integration of qualitative and quantitative data. Details of the participant characteristics were discussed related to the mother child dyad. The specific timing of breastfeeding initiation among the participants and the identified factors that influence breastfeeding initiation were described in detail. Spurious results were also addressed.

# Chapter 5 Discussion

### Introduction

A focused ethnography aimed at describing the factors affecting the timing of breastfeeding initiation among 25 Haitian mothers, particularly the specific cultural beliefs and practices was conducted in Artibonite, Haiti. The phenomenon of breastfeeding initiation with specific focus of the timing of the event was captured by a thick description structured based on the "nine major dimensions of every social situation" presented in classic work of Spradley (1980, p. 78). The presented results will be linked back to the Community Breastfeeding Network theory, the theoretical framework for this study. In the Community Breastfeeding Network theory, the facilitators of breastfeeding include feeding practices and process, closeness, maternal internal resources, and maternal external resources. When possible, the study results will also be interpreted within the context of prior relevant literature. Limitations of the study will be identified. Conclusions including recommendations for future practice, education and research will also be described.

#### Interpretation

# Relevant Literature

Literature on the timing of breastfeeding initiation is limited. The literature that does exist on the timing of breastfeeding initiation is primarily quantitative in nature and fails to fully describe the phenomenon of breastfeeding initiation. Community and culturally relevant factors that influence timing of breastfeeding initiation are not adequately described in the literature. Breastfeeding literature in Haiti, particularly related to timing of breastfeeding initiation is also limited. The gaps in literature create challenges for interpretation of this study findings within the context of relevant literature.

The limited body of literature, does however, highlight the relevance of this and future studies on the timing of breastfeeding initiation.

# Community Breastfeeding Network Theory

Study findings support the Community Breastfeeding Network (CBN) theory. In the CBN theory, optimal breastfeeding, which includes optimal timing of breastfeeding initiation occurs at the intersection of the mother child dyad, the family and the community. When early breastfeeding initiation occurred for a mother child dyad, facilitators at the levels of the mother child dyad, the family and the community existed. When delayed breastfeeding initiation occurred for a mother child dyad barriers existed in at least one of the three levels. Study findings also support the Community Breastfeeding Network theory breastfeeding facilitator categories of Process and Practice, Closeness, Maternal Internal Resources, and Maternal External Resources.

### Process and Practice

Both mother and child are physiologically ready to begin breastfeeding during the first hour of life. Early breastfeeding initiation occurred for 64% of mothers in this study, which is more frequent than national statistics. In Haiti, early breastfeeding initiation occurred with 44.3% of births and ranges from 30 to 55.4% regionally (WHO, 2009).

In both a Brazilian study and a Tanzanian study, early breastfeeding initiation occurred significantly more often, in women who had vaginal births (Victor et al., 2013; Vieria et al., 2010). All of participants in this study had vaginal births so the influence of Cesarean births on timing of breastfeeding initiation could not be assessed. Cesarean births, however, account for only 3% of Haitians births (WHO, 2013f.)

In the Brazilian study, early breastfeeding initiation occurred significantly more often among women who had infants born at term (Vieria et al., 2010). In this study, breastfeeding initiation was delayed for the one birth that was preterm at 7 months

gestation. The preterm infant had respiratory problems after birth and was not able to initiate breastfeeding until 2 hours after birth. In Haiti, preterm births account for 14% of all births (WHO, 2013f.). The underrepresentation of preterm births in this study may have potentially influenced the rates of early breastfeeding initiation among the sample being higher than national statistics. Additionally, this study was limited to mothers 18 years and older and only one of the 25 mothers was an adolescent aged 19 years.

Teenage mothers 19 years old and younger are at higher risk of preterm birth and health issues including mortality of mother and child (WHO, 2013e.).

Certain post birth health issues in the mother, child or both influenced timing of breastfeeding initiation among the study participants. Delayed breastfeeding initiation occurred with both infants that had respiratory problems. Delayed breastfeeding initiation occurred with the mother that had pregnancy-induced hypertension and postpartum hemorrhage and whose baby suffered a broken clavicle. Early breastfeeding initiation did occur, however, with both mother child dyads who had fevers after birth.

Breastfeeding initiation is necessary for early breastfeeding to occur.

Breastfeeding initiation occurred with all of the mothers, in this study. Likewise, Haiti has a high breastfeeding initiation rate of 95.7% ranging from 93.5% to 99.7% regionally (WHO, 2009). Breastfeeding initiation rates are high in Haiti, therefore, improvement in early breastfeeding initiation rates would not require a focus on improvement in overall breastfeeding initiation rates.

Available literature does not adequately describe the relationship between the four practices of not giving colostrum, giving prelacteal feedings, early breastfeeding initiation and nonexclusive breastfeeding. Saudi Arabian mothers were 13.7 times more likely to breastfeed during the first hour of life when prelacteal feedings were not given

(Gilany, Sarraf & Al-Wendy, 2012). Exclusive breastfeeding has been positively correlated with early breastfeeding initiation (Lunney et al., 2010) in another population.

Between 2005 and 2009, 40.6% of Haitian children less than six months of age were breastfed exclusively (WHO, 2009). In this study, exclusive breastfeeding since birth occurred with 57.15 % of participants with a child less than six months and exclusive breastfeeding for six months was reported by 45.46% of the participants with a child(ren) 6 months or older. Prelacteal feedings were reported by none of the mothers. Perhaps if nonexclusive breastfeeding is not inclusive of prelacteal feeding than timing of breastfeeding initiation is not influenced which is logical from a time sequencing perspective.

Although prelacteal feedings were not given by any of the participants, prelactaeal feedings may occur in other samples in Haiti. One of the mothers referenced her prior belief that colostrum was bad, stating she would have thrown out her colostrum if she had not received information on the child health benefit of colostrum. In a study of 153 mothers of children, aged 1 to 5 in rural Haiti, 19% did not breastfeed colostrum (Perez-Escamilla et al., 2009). The sample assessed by Perez-Escamilla et al. (2009) may have differed significantly from this study's sample of mothers in rural Haiti. Additionally, beliefs and practices regarding prelacteal feedings and colostrum in the area of Artibonite where the study was conducted may have been influenced by community level education to promote exclusive breastfeeding following the 2010 earthquake and subsequent cholera epidemic in the area.

During data collection, prelacteal feedings were discussed with a Haitian nurse colleague who has worked in maternal child health attending births and training midwives in the region for over 20 years including time spent working at the hospital referred to in the study. She described the custom of hand expression of colostrum and subsequent

throwing out of the expressed colostrum. Instead of colostrum infants would then be given "lok" as a prelacteal feeding. The "lok" was intended to aid with the passage of meconium.

#### Closeness

Physical closeness between mother and child during the first hour is necessary for early breastfeeding initiation to occur. Conversely, the physical separation of mother and child during the first hour post birth will prevent breastfeeding initiation in the first hour from occurring. All but two of mothers reported that breastfeeding initiation occurred when they first held their baby. Barriers to first holding are, therefore, barriers to initiation of breastfeeding. Knowledge of birth attendants' practices and rationale for post birth separation of the mother child dyad would be necessary to develop intervention to remove barriers to first holding.

The use of skin to skin is a known facilitator of optimal timing breastfeeding initiation (Mahmood, Jamal, & Khan, 2011). Early breastfeeding initiation occurred for the one mother child dyad that had skin to skin to skin contact after birth. In that case, the birth attendant, a midwife, placed the infant skin to skin with the mother immediately following the birth. In all but two cases, the birth attendant placed a physical barrier to skin to skin contact in the form of clothes and blankets. The two exceptions were the previously mentioned infant who was placed skin to skin by the midwife and the twin infants who had the physical barrier to skin to skin contact in the form of clothes and wrapping placed by a nurse other than the birth attendant nurse.

The birth attendant controlled the time of separation from birth to first holding for all but one of the mothers. The only exception, a nurse other than the birth attendant clothed, wrapped and controlled the time of separation for the mother child dyad. The

nurse, although not the birth attendant, was of the same professional background as the birth attendant.

### Maternal Internal Resources

Maternal education, experience, confidence, intent are maternal internal resources. All participants possessed knowledge that breastfeeding is good for baby's health and that colostrum was good for baby's health. Although participants possessed knowledge about the overall health benefit of breastfeeding, information specific to the timing of breastfeeding initiation was limited. About half of the mothers reported they had not been told anything about ideal timing of breastfeeding initiation from any source.

About 38 percent of the participants with early breastfeeding initiation had not been told anything about ideal timing of breastfeeding initiation from any source compared to about 67 percent of the participants with delayed breastfeeding initiation. Likewise the intent to breastfeed was conveyed more frequently than the intent to initiate breastfeeding at a specific time.

Early breastfeeding initiation was significantly more likely among Tanzanian mothers, that were at least 24 years old and mothers that had greater than a primary school education (Victor et al., 2013). Early breastfeeding initiation occurred with 40.0% of mothers who had never attended school and early breastfeeding initiation occurred with 70.0% of mothers that attended one or more years of school.

Having a parity of two or more was significantly associated with early breastfeeding initiation among Saudi Arabian women assessed (El-Gilany, Sarraf & Al-Wendy, 2012). In this study, early breastfeeding initiation occurred with 66.7% of mothers who gave birth to their first child and 63.2% of mothers who gave birth to their second or greater child. The participants in this study were all 18 years old or older. The influence

of lower age and first birth may be more apparent in a sample that includes mothers less than 18 years old.

Additionally, the one infant that was not able to latch during the first breastfeeding attempt had respiratory issues that prevented successful breastfeeding initiation. The mothers' prior breastfeeding experience or lack of breastfeeding experience would not have likely influenced the success of the initial breastfeeding attempt in this case, since the issue was related to infant health.

### Maternal External Resources

Maternal external resources include social and cultural influences as well as structural influences such as that of governments and healthcare systems. The area and participants assessed live in an area of Haiti affected by the post-earthquake cholera epidemic. Community level education about cholera has included safe water information and promotion of exclusive breastfeeding. Due to community level education and proximity to a hospital, the sample assessed in this study is likely different from samples with more remote access to skilled healthcare.

About a quarter of mothers stated they would not know who to ask for help if their baby had problems breastfeeding. Early breastfeeding initiation occurred significantly more often in Brazilian women who had been given breastfeeding education prenatally (Vieria et al., 2010). In other populations, prenatal care has been associated with early breastfeeding initiation and exclusive breastfeeding (Agho et al., 2011; Kupratakul, Taneepanichskul, Voramongkol, & Vorapong, 2010; Ogunlesi, 2010). In this study, 76% of the mothers received prenatal care and 52% attended 4 or more prenatal visits. This is fairly consistent with country statistics, 85% of Haitian mothers received prenatal care and 54% of Haitian mothers had four or more prenatal visits (WHO, 2013e.).

Giving birth in a health facility has been significantly associated with early breastfeeding initiation (Gerbaba, Belachew & Setegn, 2011; Ogunlesi, 2010) A quarter of Haitian mothers give birth in hospitals or clinics and 26% have a skilled birth attendant present when giving birth (UNICEF, 2010). Consistent with national statistics, in this study, seven mothers (28%) gave birth in the hospital and the same seven were the only participants that had access to a skilled birth attendant, as defined by WHO (2004). Early breastfeeding initiation occurred with about a quarter of the mothers that gave birth at the hospital and about three quarters of the mothers that gave birth at home. Although the findings in this study may seem paradoxical, hospital based practices can contribute to mother child separation post birth. Higher rates of delayed breastfeeding initiation may also reflect in part the level of patient acuity at hospital based births. Certain health issues in the mother, child or both were identified as key factors in delayed breastfeeding initiation.

Traditional birth attendants have been shown to influence breastfeeding practices in other settings (Thatte et al., 2009; Victor et al., 2013). Early breastfeeding initiation was significantly less likely among Tanzanian mothers who had an unskilled birth attendant such as a traditional birth attendant (Victor et al., 2013). Birth attendants were described as key actors in the timing of breastfeeding initiation in this study, controlling the time of separation of the mother and child dyad from birth to first holding. First holding was a pivotal activity closely linked to timing of breastfeeding initiation.

Cultural practices of post birth baby care and washing of the breasts were identified as factors influencing the timing of breastfeeding initiation. Early breastfeeding initiation can occur when customary baby care happens prior to breastfeeding initiation. Baby care, however, was an identified barrier to early breastfeeding initiation for 3 (12%) of participants. The custom of clothing and wrapping the child prior to holding creates a

delay from birth to first holding and also creates a material barrier between mother and child that prevents skin to skin contact.

The practice of mothers washing their breasts prior to breastfeeding initiation occurred with a fifth of mothers. The act of breast cleaning did briefly delay breastfeeding initiation. Early breastfeeding initiation occurred with 4 (80%) of the participants that performed breast cleaning. Maternal washing of breasts creates a brief delay that alone is unlikely to be a barrier to early breastfeeding initiation.

Comfort with breastfeeding was identified by the three data sources of interviews observations and artifacts. Comfort with breastfeeding occurred at the level of the mother child dyad, the family and the community. Mothers freely discussed breastfeeding and freely breastfeed during the interviews. Friends and family of the participants openly engaged in the discussions about breastfeeding. The cultural support for breastfeeding is an important resource and foundation to improve community level breastfeeding practices.

## Limitations

Maternal age and other characteristics of the sample were limitations of this study. Including only mothers who were 18 years or older was an identified limitation. Haiti has an adolescent birth rate of 69 per 1000 adolescents (UNICEF, 2010). The beliefs and practices of adult mothers may not reflect the beliefs and practices of Haitian mothers less than 18 years old. Although recruitment was open to mothers who had a deceased child, only mothers with living children less than 12 months of age were actually recruited.

Another limitation was the lack of observation at the time of birth through the time of breastfeeding initiation. Observation of participants did not include direct observation of breastfeeding initiation and the specific timing of breastfeeding initiation. The factors

associated with timing of breastfeeding initiation therefore were not observed in their natural progression and are subject to participant recall as remote as eight months after the event. Due to limited time in the field, the decision was made to interview mothers of infants instead of observing births. Additionally, presence at births would have created potential ethical dilemmas regarding observing and not intervening with potentially lifesaving care.

One of the 25 audio recordings, the recording for participant 17 was not audible. Word for word transcription and verification of hand written responses on interview schedule was not possible as was for the other 24 participants.

#### Conclusions

#### Relevance

Haiti has a high under five mortality rate of 102.6 in 2010 (Rajaratnam et al., 2010). Low-income countries such as Haiti (World Bank, 2011) bear a disproportionate burden of under-five mortality (Chan & Lake, 2012; Rajaratnam et al., 2010). Breastfeeding is considered the most powerful preventative strategy to reduce under five mortality (Jones et al., 2003). Breastfeeding is a unique intervention for reducing under five mortality with characteristics that are particularly valuable in resource poor settings such as Haiti.

Breastfeeding is a natural process and an intrinsic commodity of the mother child dyad. Unlike many other public health interventions such as vaccines, breastfeeding is not an external commodity that needs to be procured and transported to the target population, which is particularly valuable in remote and resource poor settings like Artibonite, Haiti, where this study was conducted.

Early breastfeeding initiation is associated with a 19-22% reduction in neonatal mortality (Edmond et al., 2006; Mullany et al., 2008). Limited information regarding early

breastfeeding initiation in Haiti exists. This study provided thick descriptions of timing of breastfeeding initiation. This study provided foundational knowledge of factors affecting the timing of breastfeeding initiation. Further research on factors influencing timing of breastfeeding initiation particularly from the point of view of the various types of birth attendants is needed to develop and test the effectiveness of community specific, culturally appropriate interventions aimed at improving early breastfeeding initiation rates in Haiti.

Implications for breastfeeding education and support

Education aimed at promoting early breastfeeding initiation and exclusive breastfeeding is needed. Information regarding early breastfeeding initiation needs to specifically describe early breastfeeding initiation as initiating breastfeeding during the first hour of life. The message that a baby should be breastfed when they are "fenk te fet" just born had been conveyed to several participants but that was not interpreted as breastfeeding initiation within the first hour of life. This education also needs to reach more mothers and birth attendants since almost half of mothers in this study had not been told anything about ideal timing of breastfeeding initiation from any source.

Nurses providing prenatal care, have the opportunity to provide timely and necessary breastfeeding information. Nurses are also a trusted source of information related to pregnancy, breastfeeding and baby care. A total of 23 (92%) of participants stated they would believe a nurse that presented them with information about pregnancy, breastfeeding or care of their baby. Education must extend beyond hospital based nurses since a total of 5 (20%) of participants in this sample did not have access skilled nursing care for their pregnancy and birth. Community level education would be even more critical in other locations in Haiti with more remote access to a hospital and skilled care.

This study identified several breastfeeding related educational needs including breastfeeding a preterm infant, safety of breastfeeding during maternal illness and the relationship between breastfeeding and fertility. Approximately a fourth of mothers stated they would not know who to ask for help if their baby had problems breastfeeding. Findings highlight the need for community level breastfeeding education and support resources.

Research Recommendations

Value of Ethnography

Ethnography provides in depth insight into the culture studied (Spradley, 1979). Ethnography is a valuable research methodology for nurse researchers since culture can have an impact on health and health care (Engebretson, 2011; Robertson & Boyle, 1984). Cultural knowledge gained through ethnography is particularly important for addressing health disparities among various ethnic or cultural groups (Engebretson, 2011). Ethnography is conducive to studying the complex cultural factors (Murchison, 2010). Nurse researchers have successfully used ethnography (Borbasi et al., 2005). Ethnography is holistic which makes the methodology valuable for addressing the complexities of the nursing and health related issues (Holloway, 2008).

The holistic nature of ethnographic research has many parallels to the holistic approach of nursing care (Holloway, 2008). Knowledge acquisition in nursing has similarities to knowledge acquisition in participant observation (Savage, 2000). Interviewing is an essential component in nursing care (Borbasi, Jackson & Wilkes, 2005). Nurses that are proficient at interviewing respect the interviewee and adjust the interview based on the specific situation and needs of the interviewee (Borbasi et al., 2005). Nursing requires observation skills, which are also necessary for ethnographic research (Borbasi et al., 2005). Therefore, nurse researchers may be ideally suited to be

participant observer and use ethnographic methodology (Borbasi et al., 2005; Savage, 2000).

Ethnography offers great flexibility in terms of the number of researchers used (Munhall, 2012). Only one researcher is required which is ideal for situations where access to a larger research team is limited. Multi-researcher teams have also been used effectively to conduct ethnographic studies (Woods, Boyle, Jeffrey & Troman, 2000). Various types of ethnography exist (Munhall, 2012). The use of focused ethnography, instead of traditional ethnography reduces the time investment, thereby reducing the cost and improving the feasibility of conducting the study (Munhall, 2012).

The use of ethnography in this study allowed for the harmonious integration of quantitative and qualitative data. The three data sources of interviews, observations and artifacts were valuable data that contributed to the findings. As a novice researcher, using structured field notes based on the Spradley (1980, p 78.) classic "nine major dimensions of every social situation" was particularly helpful in guiding the data collection and analysis process. The use of the eight pattern identification techniques described by LeCompte and Schensul (2013) also provided a systematic way of approaching data analysis.

Ethnography has been successfully applied to previous breastfeeding research (Flood & Dogson, 2010; Guerrero et al, 1999). Ethnography was an ideal research methodology to describe the factors including social customs and values that influence the presence or absence of early breastfeeding initiation among Haitian mothers explored in the study. Ethnography remains an underutilized research methodology among nursing and health researchers, despite the many strengths of the methodology.

## Exclusive breastfeeding

The problem of non-exclusive breastfeeding during the first six months of life was identified by this and other Haitian studies. Future intervention studies could be designed based on the timing and rationale for premature supplementation provided by participants in this study. Additionally information on trusted sources of information should guide intervention development. A pilot study to test the feasibility of an educational intervention on exclusive breastfeeding maybe a productive next step.

## Early Breastfeeding Initiation

Future research should build on the knowledge gained from this study on the timing of breastfeeding initiation. Birth attendants were identified as key actors in the timing of breastfeeding initiation among Haitian mothers in this study. Future studies may be conducted with birth attendants to explore factors that influence the timing of breastfeeding initiation. Birth attendant practices and rationale for post birth separation of the mother child dyad maybe a productive focus of future studies as well. Future studies may explore the beliefs of both mothers and birth attendants regarding post birth skin to skin contact between mother and child. Future studies using hospital based birth attendants could include hospital birth and postpartum practices and direct observation of timing of breastfeeding initiation. Direct observation of timing of breastfeeding initiation would be more feasible in a hospital setting.

The lack of structure to the community based birth care provides challenges for both assessment of early breastfeeding initiation and interventions to improve rates of early breastfeeding initiation. Female family members sometimes found the midwife that was close and female birth attendants may be involved who have had no prior experience attending births. Women in the community are potential future mothers, potential involved the birth including finding birth attendants for other women, and are

potentially a birth attendant. Assessment and future intervention needs to include a broad base of women in the community.

Future research could also explore the relationship between mothers not giving colostrum, prelacteal feedings, non-exclusive breastfeeding and early breastfeeding initiation. Additional foundational research including identification of factors that influence the timing of breastfeeding initiation among Haitian mothers is needed prior to the development and testing of interventions to improve early breastfeeding initiation in Haiti.

# **Chapter Summary**

A focused ethnography was conducted using semi-structured interviews, participant observation, and cultural artifacts to assess the factors that influence the timing of breastfeeding initiation among women in rural Haiti. A sample of 25 Haitian mothers living within the same town in rural Artibonite, Haiti with children less than 12 months old was obtained.

This study provides foundational knowledge of factors affecting the timing of breastfeeding initiation. Further research on factors influencing timing of breastfeeding initiation particularly from the point of view of the various types of birth attendants is needed to develop and test the effectiveness of community specific, culturally appropriate interventions aimed at improving early breastfeeding initiation rates in Haiti.

Appendix A

Interview Schedule

Interview Schedule

Timing of breastfeeding in rural Haiti: A focused ethnography

1- How old are you?

Ki laj ou genyen?

2a- Where were you born?

Kikote ou te fèt?

b- Where do you currently live?

Kikote ou abite kounye a la?

3a- How many people live in your home?

Konbyen moun ki abite nan lakay ou a?

b- How many rooms in your home?

Konbyen chanm yo nan lakay ou a?

c-Where do you get clean water?

Kikote ou jwenn dlo pwòp?

4a- Have you ever gone to school?

Èske ou te jamn ale lekòl la?

b- (If yes) How many years did you go to school?

(Si wi) Konbyen ane ou te ale lekòl la?

5-How many times have you given birth? (Include children who are alive and who died).

Konbyen fwa ou te akouche? (Enkli pitit yo ki vivan ak ki te mouri)

6-How many months have passed since your last birth?

Konbyen mwa te pase depi dènye akouchman ou?

7a- Is the child from your last birth alive?

Èske pitit ou nan dènye akouchman ou vivan toujou?

b- (If no) How old was your baby when he/she died?

(Si non) Ki laj se te pitit ou lè li te mouri?

c-What did he/ she die from?

Kisa ki te lakòz mouri li?

8a- Have you worked since your child was born?

Èske ou te travay depi pitit ou te fèt?

b- (If yes) When did you begin working?

(Si wi) Kilè ou te kòmanse travay?

c- Who gives your child care when you work?

Kimoun bay swen pitit ou lè ou ap travay?

9a- How many prenatal care visits did you attend during your last pregnancy?

Konbyen fwa ou te pran swen pandan dènye gwosès?

10a- Was your child born early?

Èske pitit ou la fèt bonè?

11a- If you had problem, what health problems did you have during birth, or after the birth of your child?

Si ou te gen pwoblèm, ki pwoblèm ak santé ou te genyen pandan akouchman, oubyen apre akouchman pitit ou?

b- Did you have a vaginal birth or Cesarean Section?

Èske ou te gen yon akouchman nòmal (vajinal) oubyen sezaryèn?

12a- If her/she had a problem, what health problems did your child have after he/she was born?

Si li te gen pwoblèm, ki pwoblèm ak santé pitit ou te genyen apre li te fèt?

13a- Where did you give birth? For example (hospital, clinic, home)

Kikote ou te akouche? pou egzanp (lopital, klinik, lakay ou)

b- Why did you give birth there?

Poukisa ou te akouche la?

14a- Who was present for the birth?

Kimoun la pandan akouchman an?

b- Who was your birth attendant? For example (lay midwife, family/friend, doctor,

nurse, Kimoun te fe akouchman? pou egzanp (matwòn, zanmi/fanmi, dokte, enfimyè)

c- Why did you have that birth attendant?

Poukisa ou te gen moun sa pou fe akouchman ou?

d- Did you see your birth attendant wash their hands with soap and water or an alcohol based sanitizer prior to the birth?

Èske ou te wè moun ki te fe akouchman lave men yo ak savon ak dlo oswa dezenfektan pou men ki gen alkòl anvan akouchman ou?

e- How long did the birth attendant stay with you after the birth?

Konbyen tan moun ki te fe akouchman rete ak ou apre akouchman an?

15a- Did you ever breastfeed your child?

Èske ou janm te bay tete pou pitit ou a?

- b- (If yes ) Did you breastfeed your child during the first hour after birth?
  - (Si wi) Èske ou te bay pitit ou tete pandan premye lè apre akouchman an?
- c- (If no)When did you first breastfeed your child?
  - (Si non) Kilè ou te bay pitit ou tete pou premye fwa?
- d- Why did you first breastfeed your child at that time?

Poukisa ou bay pitit ou tete pou preyme fwa lè sa a?

16a.Was your child given any liquid or food other than breast milk before the baby breastfed for the first time?

Èske pitit ou te ban manje oubyen likid ki pa lèt manman an anvan ou te bay tete pou preyme fwa?

- b. (If yes) What food(s) or liquid(s) was given to your child?
  - (Si wi) Ki manje oubyen likid ki pa lèt manman an moun te bay pitit ou?
- c. What was used to put the non breast milk liquid(s) and/ or food(s) into your child's mouth?

Kisa moun itilize pou mete manje oubyen likid ki pa lèt manman an nan bouch pitit ou?

- d. Why did a person give your child something that was not breast milk?
  - Poukisa yon moun te bay pitit ou youn bagay ki pa lèt manman an?
- 17a. What happened after the birth before you held your child? Probe (Was the baby wrapped, clothed, placed somewhere, held by someone else)

Sak pase apre akouchman an anvan ou te kenbe pitit ou? (Èske tibebe vlope, mete rad yo, tibebe ou mete yon plas, yon lot moun te kenbe li)

b- How much time passed after the birth before you held your child?

Konbyen tan pase apre akouchman an anvan ou te kenbe pitit ou?

18a- Did you hold your child with his/her bare skin on your bare skin during the first hour after birth?

Èske ou te kenbe pitit ou ak toutouni po pitit ou sou toutouni po oumenm pandan premye lè apre akouchman?

(If yes) Who put your child skin to skin during the first hour?

(Si wi) Kimoun te mete toutoni pitit ou sou po oumenm pandan premye lè?

19a- Did you have any problems the first time you breastfeed your child?
Èske ou te gen pwoblèm yo pandan premye fwa ou te bay pitit ou tete?

b- (If yes) What problem(s) did you experience?

(Si wi) Ki pwoblèm yo ou te genyen?

c- Who helped you with the problem?

Kimoun te ede ou ak pwoblèm sa?

d- What did they do to help you?

Kisa yo te fe pou ede ou?

e- Was your problem(s) resolved?

Èske ou te rezoud pwoblèm sa?

f- (If no) Who would you have asked for help if you had had a problem breastfeeding your child?

(Si non) Kimoun ou tap mande ede ou si ou te gen pwoblèm yo ak bay tete pitit ou?

20- a- (If your child is still alive) Where does your baby sleep?(Si pitit ou vivan toujou) Kikote tibebe ou la dòmi?

21a- (If child is still alive) Are you still breastfeeding your child?

(Si pitit ou vivan toujou) Èske ou toujou ap bay tete pitit ou a?

b-(If no) When did you stop breastfeeding?

(Si non) Kilè ou te fe sispann bay tete pitit ou a?

c-Why did you stop breastfeeding?

Poukisa ou te sispann bay tete pitit ou a?

d- Did you stop breastfeeding suddenly or gradually?

Èske ou te sispann toudenkou oubyen gradyèlman?

22a- (If yes & child is alive and less than 6 months old) During the last 24 hours, have you given any food or liquid to your baby other than breast milk?

(Si wi, pitit ou vivan toujou, e pitit ou mwens pase 6 mwa) Pandan 24 lè dènye èske ou te bay tibebe manje oubyen likid ki pa lèt manman an an?

b- Since your baby was born have you ever given your baby any food or liquid other than breast milk?

Depi pitit ou te fèt èske ou te bay tibebe manje oswa likid ki pa lèt manman an an?

- c- (If yes to A or B) What food(s) or liquid(s) were given to your child?

  (Si wi) Ki manje oubyen likid ki pa lèt manman an ou te ban pitit ou?
- d- When was the first time your child was given food or liquid that was not breast milk?

Kilè premye fwa pitit ou te bay manje oswa likid ki pa lèt manman an an?

e- Why was your child given something that was not breast milk?

Poukisa pitit ou te bay youn bagay ki pa lèt manman an?

23-What needs to happen during the first hour after birth? Probe (specific care of the mom, specific care of the baby, family traditions, rituals)

Kisa bezwen pase pandan preyme le apre akouchman? (swen espesyal pou manman an, swen espesyal pou tibebe a, tradisyon fanmi a, rityèl yo)

24-What have you been told about the best time after birth to start breastfeeding your baby? Probe (Told to breastfeed during the first hour after birth, Told not to breastfeeding during the first hour, told to wait to breastfeed until...)

Kisa moun te di ou ki pi bon tan apre akouchman pou konmanse bay tete pitit ou a? (di ou bay tete pandan premye lè apre akouchman, di ou pa bay tete pandan preyme lè apre akouchman, di ou tann pou bay tete jiska...

25-Who decides when a baby is breastfed for the first time? Kimoun deside lè yon tibebe pran tete pou preyme tan?

26a-In Haiti, we use the proverb "A mother's milk is better than any other milk", why do we say that?

Nan Ayati, nou itilize proverb "lèt manman an se pibon pase tout lèt", poukisa nou di sa?

27a-How would you describe first breast milk (colostrum) compared to mother's milk (breast milk)?

Kijan ou ta dekri preyme lèt manman an konpare ak lèt manman an?

28a-Do you think that colostrum (first milk) is bad for a baby's health, not bad or good for baby's health or good for baby's health?

Èske ou panse premye lèt manman an se move pou santé tibebe a, pa move pa bon pou santé tibebe a oubyen bon pou santé tibebe a?

29a-Do you think that mother's milk (breast milk) is bad for baby's health, not bad or good for baby's health or good for baby's health?

Èske ou panse lèt manman an se move pou santé tibebe a, pa move pa bon pou santé tibebe a oubyen bon pou santé tibebe a?

30a-Who would you believe if they told you that breastfeeding your baby during the first hour after birth would reduce your baby's chance of dying? Probe (For example, no person, your mother, sister, friend, a nurse, a doctor, a person who is not Haitian).

Kimoun ou tap kwe si yo te di ou si ou bay tete nan preyme lè apre akouchman an sa tap redui tibebe ou chans pou mouri? (Pou egzanp, pa gen youn moun, manman ou, sè ou, zanmi ou, youn enfimyè, youn dokte, youn moun ki pa ayisyen).

31a-If you believed that breastfeeding during the first hour after birth would reduce your baby's chance of dying would you breastfeed your next baby in the first hour after birth?

Si ou te kwe lèt manman an pandan premye lè apre akouchman an tap redui chans tibebe ou a pral mouri, èske ou ou tap bay prochen tibebe ou tete nan premye lè apre akouchman an?

32a- I heard you describe\_\_\_\_\_ as reason(s) why you (did/did not) breastfeed your baby during the first hour after birth. Did I describe the reasons correctly? If not, please describe the true reasons? What other reasons do you want to tell me?

| Mwen te tande ou di se rezon ou pa te bay tibebe ou a tete pandan premye le apr                 |
|---|
| akouchman an. Èske mwen te di rezon sa kòrèkteman? Si non, tanpri di mwen rezon ki              |
| kòrèkteman. Ki lòt rezon ou vle di mwen?  |
|   |
| 33- Other women in your community have described as reason(s) why they                          |
| (did/did not) breastfeed your baby during the first hour after birth. What reasons are the same |
| or different for you?   |
| Lòt famn nan kominote ou te di se rezon (yo) yo te bay/ pa te bay tete pandan                   |
| premye lè aprè akouchman an. Ki rezon yo menm jan pou ou menm oubyen difern pou ou              |
| menm?   |

Appendix B

Consent Form

## **Informed Consent Document**

#### PRINCIPAL INVESTIGATOR CHÈCHÈ PRENSIPAL

address/ adrès
Christy Bomer-Norton
College of Nursing
University of Texas at Arlington
411 S Nedderman Drive, Arlington, TX 76019
Mail Box: 19407
email address/ adrès imel: christy homer-norton@

email address/ adrès imel: christy.bomer-norton@mavs.uta.edu telephone number (617) 590-9726 nimewo telefòn 001 617 590 9726

#### FACULTY ADVISOR FAKILTE KONSEYÈ

address/ adrès
Dr. Jennifer Gray
College of Nursing
University of Texas at Arlington
411 S Nedderman Drive, Arlington, TX 76019
Mail Box: 19407
email address/ adrès imel: jgray@uta.edu

email address/ adres imel: jgray@uta.edu telephone number (817) 272-5295 nimewo telefon 001 817 272-5295

#### TITLE OF PROJECT

Timing of breastfeeding initiation in rural Haiti: A focused ethnography TIT NAN PWOJÈ

Tan nan bay tete inisyasyon nan seksyon riral Ayiti: Yon ètnografi konsantre sou

## INTRODUCTION

You are being asked to participate in a research study about breastfeeding. Your participation is voluntary. Refusal to participate or discontinuing your participation at any time will involve no penalty or loss of benefits to which you are otherwise entitled. Please ask questions if there is anything you do not understand.

## **ENTWODIKSYON**

Y ap mande w yo patisipe nan yon etid rechèch sou bay tete. Patisipasyon ou a se volontè. Si mwen refize patisipe oswa sispann patisipasyon ou nan nenpôt ki lè pwal enplike gen sanksyon oswa ou pèdi benefis ki kote ou gen otreman gen dwa. Tanpri poze kesyon si gen bagay ou pa konprann.

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#### **PURPOSE**

The specific purpose(s) of this research study are as follows:

- 1) To describe the thing that influence the when Haitian mothers breastfeeding their babies for the first time.
- 2) Identify the specific time after birth when Haitian mothers begin breastfeeding their infants.

#### **OBJEKTIF**

Rezon ki espesifik (yo) pou etid rechèch sa a yo jan sa a:

- Pou dekri bagay la ki enfliyanse a lè manman ayisyen bay tete ti bebe yo la pou premye fwa.
- 2) Idantifye tan an espesifik apre nesans lè manman ayisyen kòmanse bay tete ti bebe yo.

## DURATION

Participation in this study will last approximately 30 minutes to 90 minutes.

DIRE

Patisipasyon nan etid sa a pral dire apeprè 30 minit a 90 minit.

#### NUMBER OF PARTICIPANTS

The number of anticipated participants in this research study is 30.

#### KANTITE PATISIPAN NAN

Nimewo a nan patisipan antisipe nan etid rechèch sa a se 30.

#### **PROCEDURES**

The interview will be audio recorded. After the interview, the tape will be transcribed, which means they will be typed exactly as they were recorded, word-for-word, by the researcher. The tape will be kept with the transcription for potential future research involving birth and or breastfeeding practices. The tape and transcription will not be used for any future research purposes not described here.

#### **PWOSEDI YO**

Entèvyou a pral odyo anrejistre. Apre entèvyou a, tep la pral transkrivi, ki vle di yo pral tape egzakteman jan yo te anrejistre, mo-pou-mo, pa chèchè a. Ap tep sa a ap rete ak Transcription a pou fè rechèch potansyèl pwochen ki enplike nesans ak oubyen pratik bay tete. Tep la ak Transcription pa yo pral itilize pou nenpòt objektif rechèch nan lavni pa dekri isit la.

#### POSSIBLE BENEFITS

There are no direct benefits to you for participating in the study. The information gained from this study has the potential to benefit your community by being used to develop

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community programs to help reduce the number of children who die in the first month of life.

## BENEFIS KI POSIB YO

Pa gen okenn benefis dirèk pou ou pou patisipe nan etid la. Enfòmasyon ki soti nan etid sa a gen potansyèl la k'ap benefisye kominote w la pa te itilize yo devlope pwogram kominote yo ede redwi kantite timoun ki mouri nan premye mwa yo nan lavi yo.

#### POSSIBLE RISKS/DISCOMFORTS

There are no perceived risks or discomforts for participating in this research study. If you experience any discomfort please tell the researcher, you have the right to quit any study procedures at any time at no consequence.

## RISK YO KI POSIB YO/MALÈZ

Pa gen okenn risk vin konnen sa oswa malèz pou patisipe nan etid rechèch sa a. Si ou ta santi nenpòt malèz, tanpri di chèchè a, ou gen dwa pou kite fimen nenpòt pwosedi etid nan nenpòt ki lè nan pa gen okenn konsekans.

#### COMPENSATION

You will receive one scarf for compensation for your time.

## KONPANSASYON

Ou pral resevwa yon sèl moushwa pou konpansasyon pou tan ou.

#### ALTERNATIVE PROCEDURES

There are no alternative procedures offered for this study. However, you can elect not to participate in the study or quit at any time at no consequence.

## LÒT PWOSEDI YO

Pa gen okenn lòt pwosedi oubyen yo ofri pou etid sa a. Sepandan, ou ka chwazi pa patisipe nan etid la oswa ou kite a nenpòt ki lè nan pa gen okenn konsekans.

## VOLUNTARY PARTICIPATION

Participation in this research study is voluntary. You have the right to decline participation in any or all study questions or quit at any time at no consequence. Should you choose not to complete all study procedures, you will still receive one scarf.

## VOLONTÈ PATISIPASYON

Patisipasyon nan etid rechèch sa a se volontè. Ou gen dwa pou refize patisipasyon nan nenpòt oswa tout kesyon etid oswa ou kite a nenpòt ki lè nan pa gen okenn konsekans. Ou ta dwe chwazi pou pa ranpli tout pwosedi etid, w ap toujou resevwa yon moushwa.

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#### CONFIDENTIALITY

Every attempt will be made to see that your study results are kept confidential. Your name will not appear on any study documents or data. A number will be used to identify you and not your name. A copy of this consent form signed by the principal investigator and all data collected including transcriptions/tapes if applicable from this study will be stored in a locked cabinet in the College of Nursing at University of Texas at Arlington for at least three (3) years after the end of this research. The results of this study may be published and/or presented at meetings without naming you as a participant. Additional research studies could evolve from the information you have provided, but your information will not be linked to you in anyway; it will be anonymous. Although your rights and privacy will be maintained, the Secretary of the Department of Health and Human Services, the University of Texas at Arlington Institutional Review Board (IRB), and personnel particular to this research have access to the study records. Your records will be kept completely confidential according to current legal requirements. They will not be revealed unless required by law, or as noted above. The IRB at University of Texas at Arlington has reviewed and approved this study and the information within this consent form. If in the unlikely event it becomes necessary for the Institutional Review Board to review your research records, the University of Texas at Arlington will protect the confidentiality of those records to the extent permitted by

#### KONFIDANSYALITE

Pral tout efò yo dwe fè yo wè ke rezilta etid ou yo rete konfidansyèl. Non ou pa ap parèt sou nenpòt ki dokiman etid oswa done. Pral yon nimewo ka itilize yo ka idantifye w epi yo pa non ou. Yon kopi fòm konsantman sa a ki te siyen pa anketè a chèchè prensipal ak tout done yo kolekte yo ki gen ladan transkripsyon kasèt/si sa aplikab soti nan etid sa a yo pral estoke nan yon kabinè ki fèmen akle nan Kolèi la nan Nursing nan University of Texas nan Arlington pou omwen twa (3) zan aprè la fen a rechèch sa a. Rezilta yo nan etid sa a ka dwe pibliye ak / oswa prezante nan reyinyon san nonmen ou kòm yon patisipan yo. Etid rechèch Lòt te kapab évoluer nan enfòmasyon ki ou te bay, men enfòmasyon ou pa pral lye nan ou nan de tout fason; li pral anonim. Malgre ke w dwa w ak vi prive vo pral konsève, Sekretè a nan Depatman Sante ak Sèvis Moun, University of Texas nan Arlington Komite Revizyon Enstitisyon (IRB), ak pèsonèl patikilye a rechèch sa a gen aksè a dosye yo etid. Dosye ou yo pral rete konplètman konfidansyèl selon kondisyon aktyèl legal. Yo pa pral revele sòf si lalwa egzije sa, oswa jan yo note sa pi wo a. Te IRB a nan University of Texas nan Arlington revize ak apwouve etid sa a ak enfòmasyon an nan fòm konsantman sa a. Si nan evènman an fasil li vin nesesè pou Komisyon Konsèy la Revizyon Enstitisyon yo revize dosye rechèch ou an, University of Texas nan Arlington pral pwoteje konfidansyalite enfômasyon ki dosye sa yo nan limit ki lalwa pèmèt.

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#### CONTACT FOR QUESTIONS

Questions about this research study may be directed to Christy Bomer-Norton at christy.bomer-norton@mavs.uta.edu or Dr. Jennifer Gray at jgray@uta.edu or 001-817-272-5295. Any questions you may have about your rights as a research participant or a research-related injury may be directed to the Office of Research Administration; Regulatory Services at 817-272-2105 or regulatoryservices@uta.edu.

#### KONTAKTE POU KESYON

Kesyon sou etid rechèch sa a kapab ale jwenn Christy Bomer-Norton nan christy.bomer-Norton mavs.uta.edu @ oswa Dr Jennifer Gray nan jgray@uta.edu oswa 001-817-272-5295. Nenpòt kesyon ou ka genyen sou dwa ou genyen kòm yon patisipan rechèch oswa yon aksidan ki gen rapò ak rechèch kapab ale jwenn Biwo pou Rechèch Administrasyon; Sèvis Regilasyon nan 001-817-272-2105 oswa regulatoryservices@uta.edu

As a representative of this study, I have explained the purpose, the procedures, the benefits, and the risks that are involved in this research study:

Kòm yon reprezantatif nan etid sa a, mwen te eksplike rezon an, pwosedi yo, benefis yo, ak risk yo ke yo ap patisipe nan etid rechèch sa a:

Signature and printed name of principal investigator

Date

#### CONSENT

By agreeing to continue with the interview, you confirm that you are 18 years of age or older and have had this document read to you. You have been informed about this study's purpose, procedures, possible benefits and risks, and you have received a copy of this form. You have been given the opportunity to ask questions before you sign, and you have been told that you can ask other questions at any time.

You voluntarily agree to participate in this study. By agreeing to continue with the interview you are not waiving any of your legal rights. Refusal to participate will involve no penalty or loss of benefits to which you are otherwise entitled. You may discontinue participation at any time without penalty or loss of benefits, to which you are otherwise entitled.

#### KONSANTMAN

Lè ou siyen anba a, ou konfime ke ou se ki gen 18 an oswa ki pi gran ak te li oswa li te genyen dokiman sa a li ba ou. Ou yo te enfòme sou objektif etid sa a la, pwosedi, benefis ak risk posib, epi ou te resevwa yon kopi fòm sa a. Ou te ba li chans pou poze kesyon anvan ou siyen, epi ou te di ke ou ka mande lòt kesyon a nenpòt ki lè. Ou dakò volontèman yo patisipe nan etid sa a. Lè w siyen fòm sa a, ou pa deziste l parapò ak nenpòt nan dwa legal ou. Si mwen refize patisipe pwal enplike gen

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sanksyon oswa ou pèdi benefis ki kote ou gen otreman gen dwa. Ou ka sispann patisipasyon nan nenpòt ki lè san penalite oswa pèdi benefis ou, kote ou ap gen dwa otreman.

Participant ID # SIGNATURE of PRINCIPLE INVESTIGATOR DATE/TIME

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## Biographical Information

Christy Bomer-Norton earned her Bachelor's of science in nursing from Johns Hopkins University in 2000. In 2005, she earned her certificate in nurse midwifery and in 2006 her Masters in nursing with a specialty in midwifery from Frontier University (formally known as Frontier school of Midwifery and Family Nursing). She has been an International Board Certified Lactation Consultant (IBCLC) since 2007. Christy is currently a PhD candidate in nursing at the University of Texas at Arlington, a program that focuses on culturally diverse and vulnerable populations.

Christy's career has been focused on maternal child health. She spent a year, from 2000-2001, volunteering as a nurse in Artibonite, Haiti and is passionate about global health issues. She has worked in both hospital and community settings. She has worked as a research assistant, labor and delivery nurse, as well as an inpatient and outpatient lactation consultant.

Christy's primary research interest is global birth and breastfeeding practices particularly in Haiti and other resource poor settings. She is interested in use of ethnography as a methodology to assess birth and breastfeeding practices. Christy received the Fern Kyba fellowship and Graduate Dean Dissertation fellowship for her dissertation entitled "Timing of breastfeeding initiation in rural Haiti: A focused ethnography." Christy is interested in the use of theory as a tool to holistically approach breastfeeding as a public health intervention and recently published "Breastfeeding: A holistic Concept Analysis" (Bomer-Norton, 2013). Christy also developed the Community Breastfeeding Network theory in 2010 as a theoretical tool to approach optimal breastfeeding practices.