

CHAPTER 1

Introduction

Background and Significance of the Research Problem

Breastfeeding has long been recognized as being superior to artificial feeding for a variety of reasons. The evidence of the nutritional, immunological, behavioral, economic and environmental benefits of breastfeeding for both developed and developing countries is overwhelming and indisputable. Scientific studies show that it has significant benefits for infants, mothers, and societies (American Academy of Pediatrics [AAP], 2005; United Nations Children's Fund [UNICEF], 2012; World Health Organization [WHO], 2002, 2009; Yimyam, 2013). The importance of breastfeeding intervention has been established to reduce neonatal and child mortality rates (Mullany et al., 2008; UNICEF, 2013a). Early initiation of breastfeeding in the first hour could prevent 22.0% of worldwide neonatal deaths (Edmond et al., 2006). Colostrum, the rich milk produced by the mother during the first few days after delivery reduces the chances of death in the neonatal period by five times (Boccolini, Carvalho, Oliveira, & Escamilla, 2013). It also enhances brain development and provides essential nutrients as well as antibodies to boost an infant's immune system (Der, Batty, & Deary, 2006; Kramer et al., 2008; UNICEF, 2013b), resulting in less diarrhea, reduced respiratory infection, lower chance of ear infections, reduced risk of hypothermia (Huffman, Zehner, & Victoria, 2001; Lamberti, Fischer-Walker, Noiman, Victora, & Black, 2011), and lower risk of obesity in newborns (WHO, 2009). The long-term benefits of breastfeeding practice include the fact that infants who are breastfed regularly are less likely to suffer from the risk of childhood leukemia, diabetes (Bhutta et al., 2008; Kramer & Kakuma, 2012; Ip et al., 2007; WHO, 2012), asthma, pneumonia (Imtiaz & Saleem, 2009), and obesity (Kramer et al., 2007).

Furthermore, the maternal benefits of breastfeeding are that it promotes stronger maternal uterine contractions; reduces the chances of breast cancer and ovarian cancer

among mothers (Chan & Heung, 2011); and lowers the risk of chronic diseases such as diabetes, heart disease and asthma (WHO, 2009). Hormones released during breastfeeding create feelings of warmth and calm, resulting in improvement of the bond between mother and child (WHO, 2002, 2009). Milk production serves as a child spacing agent by lactational amenorrhoea, which is especially important in developing countries where awareness, acceptability and availability of modern family planning methods are very low (WHO, 2009; Ministry of Women and Child [MCW] 2012).

Breastfeeding practice is the feeding activities of an infant with breast milk, especially within six months of the postpartum period (UNICEF, 2013a). Breastfeeding practice is classified by the WHO (2002, 2009) into three different types. First, *exclusive breastfeeding* (EBF) refers to the practice of a mother in providing infants only her breast milk. No other solids or liquids, including water, are given with the exception of oral rehydration solution or drops/syrups of vitamins, minerals or medicines. Second, *partial breastfeeding* refers to the practice of a person giving a baby a combination of breast milk and some artificial feeds, either milk or cereal, or other food. Third, *no breastfeeding* refers to the practice of a mother in providing her infant formula or non-maternal expressed milk.

Therefore, the WHO recommends the practice of breastfeeding and states that,

“Infants should be exclusively breastfed for the first six months of their lives, followed by continued breastfeeding for up to two years to achieve optimal growth, development and health of the infant.” (WHO, 2002, p.5)

Baby Friendly Hospital Initiation (BFHI) was developed for initiating breastfeeding practice in order to restore the natural process of breastfeeding tradition (Coates, 2007). The BFHI is a globally initiated program sponsored by the WHO and UNICEF to encourage hospitals and birthing centers to offer an optimal level of care for lactation. There are ten steps to being a successful breastfeeding facility and getting recognized as a ‘baby-friendly facility’, and those that accomplish this are officially designated as such. The BFHI assists hospitals in giving breastfeeding mothers the information, confidence and skills needed to successfully initiate and continue breastfeeding infants; it gives special recognition to hospitals that follow “baby

friendly” practices (WHO/UNICEF, 2009). Well Baby Clinic of Paropakar Maternity and Women's Hospital in Nepal is a tertiary central maternity hospital. It has adopted the BFHI ten-step system in order to successfully initiate and continue breastfeeding to infants by their mothers. They organize regular events and programs to train and retrain the hospital staff, prioritizing the importance of breastfeeding and BFHI.

Despite strong evidence in support of breastfeeding for the first six months of life (WHO, 2002), its prevalence worldwide has remained low (WHO, 2014a). In 2012, 85 million newborns worldwide failed to receive the benefits of exclusive breastfeeding for the first six months, out of which almost half of them (40 million) live in Asia. Percentagewise, 78.0% of infants are breastfed within an hour of birth in South Asia (UNICEF, 2013a; WHO, 2014a). The average practice of breastfeeding rate at six months in South Asia is 65.0% (The International Baby Food Action Network [IBFAN] & Breastfeeding Promotion Network of India [BPNI], 2014). Breastfeeding practice in South Asian countries varies widely. At six months, breastfeeding practice in Afghanistan is 54.3%; in Bangladesh it is 64.0%; in Sri Lanka it is 76.0%; in Bhutan it is 59.0%; in India it is 46.8 % and in Nepal it is 70.0% (World Breastfeeding Trends Initiative [WBTi], 2012). The average global exclusive breastfeeding rate of 2006 – 2010 was 39.0%. The global goal is to increase the rate to 50% by 2025 (WHO, 2014a).

In Nepal, the prevalence of exclusive breastfeeding among both adult and adolescent mothers was 74.0% at birth, 78.0% at one month, and 53.0% at six months. As for partial breastfeeding, 15.0% initiated at birth, 38% at one month, and 69-79.0% at six months (Nepal Demographic Health Survey [NDHS], 2011; Ulak, Chandyo, Mellander, & Shrestha, 2012). The reason for the higher initiation of breastfeeding practices in Nepal may be attributed to their deep rooted cultural practices and beliefs (Kumar et al., 2006).

A recent report by UNICEF showed that 39.0% of under-5 children are underweight and 13.0% are wasted in Nepal. Out of every ten children, five are malnourished and are stunted (UNICEF, 2015). Additionally, the 2011 survey showed that Nepal had a high infant mortality rate—46 deaths per 1,000 live births. Under-five mortality rate for the same period was 54 deaths per 1,000 live births (Nepal Demographic And Health Survey [NDHS], 2011). The most common causes of death in

children are diarrhea and respiratory infections. Malnutrition is responsible, directly or indirectly, for about one third of deaths among children under five. About two thirds of these deaths, often associated with inappropriate feeding practices, occur during the first year of life. Nutrition and immunization are the important and essential components of health promotion in children. Therefore, ignorance of the importance of breastfeeding and supplementary food at the right time are side-lying causes of malnutrition problems in children. Mothers can prevent or minimize these problems through proper care of their children (Koirala & Koirala, 2015). The early cessation of breastfeeding and initiation of complementary foods leads to malnourished children and the growing rate of child mortality and morbidity, which are major health threats to the nation. (Mannel, Martens, & Walker, 2013.)

The cultural food taboos and beliefs which are deeply rooted in Nepalese communities are also found to be a major factor influencing the breastfeeding practices (Vaahtera et al., 2001). The readymade local herbal drops (*Janamghuti*) was found to be a common tradition in Nepalese community, and infants are started on it at around one month. According to the local belief, these drops are given to the infants to maintain clean bowels and to remove unnecessary contents by inducing vomiting. (Ulak et al., 2012). Similarly, a quantitative and qualitative study conducted among 750 young children residing in the far western district of Baitadi, Nepal, found that nuts, especially dates (*chokda*) and nutmegs (*jaiphal*) are mashed and given to the infants. According to local beliefs, it will soothe the baby and induce normal sleep. Usually it is given in small amounts. Insufficient breast milk was the main reason for introducing other foods, especially semi-solid porridge (*lito*) before six months (Moffat, 2002) (Nepal Nutrition and Food Security Bulletin [NNFSB], 2010). It is also noteworthy that in the local setting, rice is introduced at 5-6 months in a special ceremony called *Pasni* (“the rice feeding ceremony”), which also seems to interfere with exclusive breastfeeding practice for up to six months of age (Ulak et al., 2012).

Another study showed a higher use of local herbal drops and early practice of partial feeding from extended family members, leading to a significantly lower prevalence of EBF or predominant feeding among infants. This indicates the importance of involvement of other family members during breastfeeding counseling, especially

mothers-in-law, who are usually directly involved in child care. In a typical joint family structure in Nepal, the mother does not usually have the primary decision-making role, so the feeding patterns of a child are affected by other family members and relatives (Chandrasekhar, Joshi, Shankar, Rana, & Ramachandran, 2007).

Despite awareness programs, many adolescent girls between the ages of 15 and 19 get pregnant. About 16 million women between 15-19 years old give birth each year, which accounts for about 11.0% of all births worldwide. Ninety-five percent of these births occur in low to middle income families. The average adolescent birth rate in low income countries is over five times as high as that of the high income families. In low and middle income families, almost 10.0% of girls become mothers by the age of 16 years (WHO, 2016). Studies show that the rate of marriage for Nepalese girls under 18 is 41.0%, and 52.3% of Nepalese girls are married by the age of 18 (Maharjan, Karki, Shakya, & Aryal, 2012) (Nepal Demographic Health Survey [NDHS], 2011). Moreover, 17.0% of girls under the age of 20 had given birth or were pregnant with their first child (NDHS, 2011).

Several studies have found that young mothers are less likely to initiate and continue breastfeeding than adult mothers (Atuyambe et al., 2008; Infant Feeding Surveillance System [IFSS], 2012; Ogonna & Daboer, 2007; Santo, de Oliveira, & Giugliani, 2007). A study in Bangladesh infers that adult mothers breastfeed their babies for a longer period in comparison with younger mothers (Giashuddin & Kabir, 2003). Likewise, a Ugandan study found that adolescent mothers were more likely to delay initiation of breast feeding compared to adult mothers (Atuyambe et al., 2008). An American study also showed that breastfeeding rates remain disproportionately low among adolescent mothers. National data suggest that only 60.0% of women less than 20 years old initiate breastfeeding, whereas almost 80.0% of women over 30 do so. Additionally, only 20% of young women are still breastfeeding at 6 months, compared to 50% of older women (AAP, 2005). In addition, a study done in Durham, UK, in 2006-2011 showed that 84.0% of adolescent mothers (age 15-19) initiate breastfeeding versus 92.0% among adult mothers (age 20 and older), and only 19.0% of adolescent mothers breastfeed their babies for six months or longer, compared to 52.0% of adult mothers (IFSS, 2012). Moreover, a Brazilian study found that adolescent mothers were

1.5 times more likely to cease breastfeeding before their babies were six months of age compared to adult mothers (Santo et al., 2007); higher prevalence of initiation of early weaning has also been found among young mothers compared to adult mothers (Frota & Marcopita, 2004).

Previous studies revealed that Nepalese adolescent mothers' breastfeeding practice has been significantly lower than adult mothers (Aryal, 2007; Khanal, Adhikari, Sauer, & Zhao, 2013). The authors discussed that their lower prevalence of breastfeeding practice may be due to lack of knowledge, confidence, and skill in regard to breastfeeding (Khanal et al., 2013).

Considering the above findings, it could be concluded that adolescent mothers are a vulnerable group to discontinuation of breastfeeding practice. Moreover, the number of adolescent mothers is high in the Nepalese context due to early marriage and early pregnancy. Therefore, it is interesting to investigate breastfeeding practice and its influences among Nepalese adolescent mothers.

An *adolescent* is a person who is from ages 10 to 19 years in the life span. According to the WHO, *adolescence* is the transition between childhood and adulthood, a time in which they must learn to assume full responsibility with mastering many new skills to adjust in a society. (WHO, 2014b). Breastfeeding is also a new challenge which needs skills and experience to perform successfully among adolescent mothers (Spear, 2006). On the other hand, studies have suggested that adolescent mothers lack knowledge and the practical skills, have not been instructed on the importance, and are unprepared to incorporate breastfeeding (Hunter, 2008; Nelson, 2009). As a result, most of these mothers discontinue breastfeeding due to a variety of reasons such as playing multiple roles in the family, their own independency, and poor knowledge (Smith, Coley, Labbok, Cupito, & Nwokah, 2012). Adolescent mothers sometimes choose formula feeding, which makes returning to work or school easier (Spear, 2006; Nelson, 2008). Wojnar (2004) stated that young mothers have to experience several difficulties during the process of breastfeeding. In addition, the decision regarding continuity of breastfeeding is based in the perception of the mothers' experience of breastfeeding. Hall and Hauck (2007) described that new mothers do not receive enough information on the difficulties associated with breastfeeding. Therefore, first-time young mothers

may have many questions about breastfeeding and may need assistance during the first feeding (Mckinney, James, Murrary, & Ashwill, 2005). Several studies have shown that there is a lack of confidence among adolescent mothers due to inadequate knowledge and support (Wang, 2012). This lack of confidence or breastfeeding self-efficacy can lead to discontinuation of breastfeeding (Wambach et al., 2011).

Breastfeeding *self-efficacy* refers to a mother's confidence in her ability to breastfeed her infant (Dennis, 1999a). The concept of breastfeeding self-efficacy was derived from Bandura's self-efficacy theory. According to Bandura, *self-efficacy* is what people believe that they are capable of in terms of performing specific behaviours in order to attain certain goals, which comes from their own motivation, behaviour, and development (Bandura, 1977). Mothers' beliefs have a strong effect on breastfeeding practice. A breastfeeding mother must not only believe that the recommended breastfeeding strategies are effective, but she must also believe in her ability to implement those strategies (Dennis, 1999b).

In Dennis's study (1999a), maternal breastfeeding confidence was significantly related to breastfeeding at six weeks postpartum (Dennis, 1999a). There are several studies that support the significant effect of self-efficacy on breastfeeding practice among adult and adolescent mothers; this effect has been well documented over numerous other breastfeeding factors, as well. Low maternal breastfeeding confidence is associated with early cessation of breastfeeding among mothers (Dennis, 2002; Blyth et al., 2002). In addition, a literature review of 12 breastfeeding studies in Japan found that maternal breastfeeding confidence increased the duration of breastfeeding practice (Inoue, 2012). Furthermore, this has also been supported by a Japanese study which emphasizes that correct information and confidence on exclusive breastfeeding practice among mothers have a positive influence on continuation of breastfeeding practice (Koskinen, Aho, Hannula, & Kaunonen, 2014). Moreover, a prospective correlational study in the UK on breastfeeding among 100 pregnant adolescent mothers to investigate attitudes and confidence on breastfeeding practice using the Breastfeeding Self-Efficacy Scale-Short Form (BSES-SF) and the Breastfeeding Attitude Questionnaire (BAQ) shows that mothers with higher prenatal breastfeeding attitude scores and higher prenatal and postnatal confidence scores were more likely to continue breastfeeding for

4 weeks longer postpartum than those adolescent mothers who have low breastfeeding attitudes and confidence. This finding shows the positive correlation between breastfeeding practice and breastfeeding self-efficacy (Mossman, Heaman, & Dennis, 2008).

Several studies have been conducted to investigate self-efficacy and breastfeeding practice among adolescent mothers (Beattie-Fairchild, 2013; Blythe et al., 2002; Mossman et al., 2008). However, these studies have been carried out in different countries, mostly in developed countries with different cultural and socio-economic contexts from Nepal. Thus, it could be difficult to apply the findings of these studies with Nepalese adolescent mothers. Additionally, the studies on breastfeeding practice in Nepal were only conducted among general population (Khanal et al., 2013; Nepal Nutrition and Food Security Bulletin [NNFSB], 2010; Paudel & Giri, 2014; Shrivastava, Singh, & Shah, 2013). The results from the population of general mothers may not explain the situation of breastfeeding practice and self-efficacy among Nepalese adolescent mothers.

Therefore, this study aims to explore the breastfeeding practices and compare self-efficacy among first-time adolescent mothers, giving different types of breastfeeding within six months of the postpartum period, using a breastfeeding practice questionnaire (Yimyam, 2013). The breastfeeding self-efficacy theory has been applicable to this study because it assesses the perceived ability, confidence and unique needs of Nepalese adolescent breastfeeding mothers. Breastfeeding self-efficacy theory identifies focus areas for nursing practice, and it promotes specific approaches to increase breastfeeding initiation and continuation of breastfeeding. Furthermore, the issue of the comparison of exclusive breastfeeding needs further clarification. The results can be used as baseline information for breastfeeding practices among adolescent mothers in order to improve breastfeeding self-efficacy and breastfeeding practice among Nepalese adolescent mothers.

Objectives of the Study

1. To describe breastfeeding practice within the first six months of postpartum among first-time Nepalese adolescent mothers.
2. To compare breastfeeding self-efficacy among the first-time Nepalese adolescent mothers who give different types of breastfeeding within six months.

Research Questions

1. How do first-time Nepalese adolescent mothers practice breastfeeding within six months postpartum?
2. Are there any differences in breastfeeding self-efficacy among first-time Nepalese adolescent mothers who give different types of breastfeeding within six months of postpartum?

Definition of Terms

Breastfeeding practice is the type of infant feeding within six months of the postpartum period (UNICEF, 2013). Breastfeeding practice is divided by the WHO (2002, 2009) into three types: 1) *Exclusive breastfeeding* is the infant feeding only with breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids except vitamins, mineral supplements, or medicines in drop or syrup form. 2) *Partial breastfeeding* refers to practice of a mother giving a baby some breastfeeds and some artificial feeds, either milk or cereal, or other food. 3) *No breastfeeding* refers to the practice of a mother in providing her infant formula or non-maternal expressed milk. In this study, maternal breastfeeding practice was measured through a breastfeeding practice questionnaire, using open-ended and closed questions (Yimyam, 2013). The original version of the breastfeeding practice questionnaire was back-translated to a Nepali version by a certified bilingual expert.

Breastfeeding self-efficacy refers to a mother's confidence in her ability to breastfeed her infant. In this study, maternal breastfeeding self-efficacy was measured by Dennis's breastfeeding self-efficacy short-form scale (BSES-SF) (Dennis, 2003).

The original version of the Breastfeeding Short Form (BSES-SF) questionnaire was back-translated to a Nepali version by a certified bilingual expert.

Adolescent mothers refers to first-time Nepalese women who have given birth at an age of under 20 years.



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