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## LIST OF ABBREVIATIONS

|        |  |
|--------|--|
| AACAHB | Addis Ababa City Administration Health Bureau                    |
| AIDS   | Acquired Immunodeficiency Syndrome                               |
| ANC    | Antenatal Care   |
| ART    | Antiretroviral Treatment   |
| CDC    | Center for Disease Control                                       |
| CHERG  | Child Health Epidemiology Reference Group                        |
| CI     | Confidence Interval  |
| CSA    | Central Statistical Agency                                       |
| EBF    | Exclusive Breastfeeding  |
| EDHS   | Ethiopian Demographic and Health Survey                          |
| ESTC   | Ethiopian Science and Technology Commission                      |
| FHI    | Family Health International                                      |
| FMOH   | Federal Ministry of Health                                       |
| FPN    | Finite Population Correction                                     |
| GDP    | Gross Domestic Product   |
| HIV    | Human Immunodeficiency Virus                                     |
| N      | Number   |
| PHCU   | Primary Health Care Unit   |
| PHD    | Doctor of Philosophy   |
| PMTCT  | Prevention of Mother to Child Transmission of HIV                |
| PNC    | Postnatal Care   |
| PNC    | Post Natal Care  |
| Rho    | Spearman Rank Order Correlation Coefficient                      |
| SCT    | Social Cognitive Theory  |
| SD     | Standard Deviations  |
| UNAIDS | United Nations Programme on HIV and AIDS                         |
| UNDP   | United Nations Development Programme                             |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNFPA  | United Nations Fund for Population Agency                        |
| UNICEF | United Nations Children's Emergency Fund                         |



|       |                                   |
|-------|-----------------------------------|
| UNISA | University of South Africa        |
| VCT   | Voluntary Counselling and Testing |
| WFI   | Women for Life                    |
| WFP   | World Food Programme              |
| WHO   | World Health Organisation         |
| %     | Percent                           |

# **CHAPTER ONE**

## **ORIENTATION TO THE STUDY**

### **1.1 INTRODUCTION**

The first chapter on the orientation to the study provides an overview of the study in terms of: the background and rationale for the study, the problem statement, the aim and objectives of the study, the significance of the study, the theoretical and methodological foundation of the study, the definition of key concepts, the ethical statement, and an outline of the report.

### **1.2 BACKGROUND AND RATIONALE FOR THE STUDY**

The feeding of an infant or young child with breast milk directly from female human breasts via lactation (breastfeeding) rather than from a baby bottle or other container has been practiced as part of nurturing the growth and development of the infant throughout the history of humankind (Tönz. 2000). This practice was the rule in ancient times but declined significantly from 1900 to 1960s; due mainly to human milk substitute's aggressive marketing (Spark 2007: 202).

Breastfeeding is more than a process of a mother feeding her infant with the milk from her breast. It involves a dynamic, mutual, and biological dialogue between the infant and the mother. Through breastfeeding physical, biochemical, hormonal, and psychosocial exchanges take place (Raju, 2011). The decision to breastfeed a child is ultimately a choice of the mother but this choice is influenced by multi-level factors including social-cognitive variables. For a primiparous' mother, this decision is further complicated with the anxiety underlying any first experience (Semenic, Loiselle, and Gottlieb, 2008; O'brien, Buikstra, and Hegney, 2008).

Globally, breastfeeding is promoted as the ideal method of infant feeding during the first six months of life due to its associated health benefits to both mother and child. Breastfeeding, especially exclusive breastfeeding (EBF) is estimated to prevent potentially 1.4 million deaths every year among children under five (UNICEF, 2012b). Human breast milk is considered the healthiest form of milk for babies, as it promotes health and helps to prevent disease (WHO 2009; WHO 2012). Breast milk

is uncontaminated and contains all the nutrients necessary in the first few months of life. Mother's antibodies in breast milk provide infants with immunity to different diseases (Spark 2007). It has a significant positive impact on child growth and development and decreases the risk for many acute and chronic diseases, including diarrhoea and respiratory tract infections during infancy (CHERG 2013).

Studies suggest that infants who are breastfed are less likely to develop obesity, respiratory illness; diarrhoea, gastrointestinal and many other chronic diseases (CDC 2010; WHO, UNICEF and USAID 2008; WHO 2009). It is argued that early suckling stimulates the release of prolactin, which helps in the production of milk, and oxytocin, which is responsible for the ejection of milk and stimulates the contraction of the uterus after childbirth.

Initiating lactation within hours after birth has positive result on the biological and emotional health of the new-born and also benefits the mother (WHO 2012, CHERG 2013). Meanwhile, reduction in neonatal mortality, longer duration of breastfeeding, uterine contraction and minimal maternal blood loss and healthier relationship between mother and child are some of the benefits associated with early initiation of breast feeding (El-Gilany, Sarraf, and Al-Wehady, 2012; UNICEF, WHO, UNESCO, UNFPA, UNDP, UNAIDS, WFP & World Bank. 2010).

Breastfeeding also increases bonding between mother and infant, reduces the likelihood of maternal breast and ovarian cancer later in life. It has great economic advantage compared to purchasing formula (Kronborg and Vaeth 2009; Purdy 2010). Among the top 15 child survival strategies, EBF up to six months of age and breastfeeding up to 12 months are viewed as the most effective intervention strategies.

The combination of these interventions is estimated to prevent almost one-fifth of under-five mortality in developing countries (UNICEF 2011:11). According to the WHO report, inappropriate feeding practices during the first years of life is directly or indirectly associated with more than two thirds of under-fives death due directly or indirectly to malnutrition (WHO 2013).

Despite the health benefits and economic gains associated with breastfeeding, efforts to promote breastfeeding, specifically early EBF during the first six months

have not produced the expected results (UNICEF 2011; Kambale and Falconara 2011). In 2011, the Ethiopian Demographic Health Survey showed that 51.5% of Ethiopian mothers initiated breastfeeding within the first hour post-delivery. On average, mothers' living in Addis Ababa breastfeed their children for one month compared to the national average of 4.2 months (EDHS 2011).

Studies suggest that interventions based on modifiable variables, particularly social-cognitive variables are more effectively in improving breastfeeding practices among mothers (McQueen, Dennis, Stremler, and Norman 2011; Al-Akour, Khassawneh, Khader, Ababnesh and Haddad 2010). However, primiparous mothers have been excluded in most studies looking at the determinants and strategies to improve breastfeeding practices (Eidman, 2011).

It is within the above background that this study looked at the social-cognitive predictors of timely initiation of breastfeeding and exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia during the first six months post-delivery with the view of proposing social-cognitive strategies to promote exclusive breastfeeding practices among this group of new mothers.

### **1.3 STATEMENT OF THE RESEARCH PROBLEM**

Despite the strong association between social-cognitive variables and mothers' breastfeeding behaviour and the low rate of exclusive breastfeeding among Ethiopian mothers, there has been no attempt to develop social-cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Ethiopia. The health benefits and economic gains of exclusive breastfeeding for the mothers and the new-born are well-documented in the literature as discussed in the background and the rationale for this study. The effectiveness of the social cognitive based interventions in promoting breastfeeding among women in general is also documented as discussed the background of this study.

Finally, the low rates of timely initiation of breastfeeding and exclusive breastfeeding practices in Addis Ababa and the limited documented scientific information that can assist healthcare professionals to formulate social-cognitive interventions to promote timely initiation of breastfeeding and exclusive breastfeeding among

primiparous mothers in Addis Ababa, Ethiopia have been discussed in the background.

The lack of evidence regarding the social-cognitive strategies that could be used to promote exclusive breastfeeding practices among primiparous mothers in Ethiopia means that current exclusive breastfeeding promotion interventions or strategies may not produce the expected outcomes. This assumption seems to be supported by low rate of early initiation of breastfeeding in country (51.5% instead of at least 75% as recommended by WHO) and shorter period of breastfeeding (one month) among mothers in Addis Ababa (CSA and ICF 2012) despite various strategies and interventions that have been implemented.

It is therefore relevant to answer the following two main questions: (1) What are the social-cognitive predictors of exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia during the first six months post-delivery?, and (2) What social-cognitive strategies could be proposed to promote exclusive breastfeeding practices among primiparous mothers in Addis Ababa, Ethiopia?

#### **1.4 AIM AND OBJECTIVES OF THE STUDY**

The study was conducted with the aim of determining the social-cognitive predictors of exclusive breastfeeding among primiparous mothers during the first six months post-delivery with the view of developing social-cognitive strategies to promote exclusive breastfeeding practices among primiparous mothers in Addis Ababa, Ethiopia.

The objectives of the study were:

1. To explore and describe the prenatal social-cognitive breastfeeding behaviour of primiparous mothers, in terms of
  - 1.1. Intentions (goals),
  - 1.2. Outcome expectancy,
  - 1.3. Self-efficacy, and

- 1.4. Socio-structural factors.
2. To describe actual breastfeeding practices of the primiparous mothers during the first six months postnatal period.
3. To determine the social cognitive predictors of exclusive breastfeeding during the first six months postnatal period.
4. To propose social-cognitive strategies that could be used to promote exclusive breastfeeding among primiparous mothers within the context of Addis Ababa, Ethiopia.

## **1.5 SIGNIFICANCE OF THE STUDY**

The promotion of exclusive breastfeeding is important in the improvement of child survival and effective management of resources. The use of social-cognitive variables in health promotion interventions are shown to be effective in behaviour modification (Bandura 2000).

*In term of the contribution to the body of knowledge:* This study documented prenatal social cognitive breastfeeding behaviour, the actual breastfeeding practices, and the associations between the prenatal breastfeeding behaviour and the actual breastfeeding practices among primiparous mothers. The results will also contribute in closing this gap regarding the lack of information regarding the social-cognitive predictors of timely initiation of breastfeeding and exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia.

*With regard to public health practice:* This study provides public health practitioners with social-cognitive strategies that they could use to promote EBF among primiparous mothers in Ethiopia. The results of this study have the potential to assist public health professionals and educators to formulate interventions that focus on modifiable variables that are known to increase the effectiveness of breastfeeding behaviour. Such interventions will improve breastfeeding practices among primiparous mothers.

*With regard to policy:* The results of this study will contribute to the national child survival programme in providing evidences on what to focus on and prioritise in the development and promotion of EBF among primiparous mothers as part of the national child survival, and the infant and young child feeding strategy.

The results also have the potential to assist public health authorities to refocus breastfeeding promotion interventions on modifiable variables that have great influence on the mother's decision to breastfeed. Consequently, it will lead to the improvement of the child survival and to effective management of resources.

*For education and research:* Public health educators and researchers can use the results of this study as baseline information for further research looking at the development of breastfeeding promotion guideline.

## **1.6 THEORETICAL FOUNDATION**

This study used Bandura's Social Cognitive Theory (Bandura 2000) as a theoretical framework to structure the study and to guide the design of data collection instruments.

Social cognitive theory attempts to explain how people regulate their behaviour via reinforcement and control to achieve goal-directed behaviour that can be maintained over time. It is based on the operation of established principles of learning within the human social context (Luszczynka and Schwarzer 2005). Unlike, most behavioural and social theories which focus on individual, social, and environmental factors that determine individual or group behaviour (for example, barriers, rewards and punishments, and social norms portrayed in mass communication).

It is argued that human behaviour is the product of the dynamic interplay of personal, behavioural, and environmental influences. And social cognitive theory recognises how environments shape behaviour, and focuses on people's potential abilities to alter and construct environments to suit purposes they devise for themselves (McAlister, Perry and Parcel 2008:170). Table 1 provides the definition of the main constructs that form the basis of this interaction.

Breastfeeding is both a health and human behaviour. As a human behaviour, breastfeeding is viewed as a product of multiple influences, and one significant source of influence is the web of interactions people have with others within their social circles (Lewallen, Dick, Flowers, Powell, Zickefoose, Wall, and Price 2006; Lewallen 2006).

It is within that context that the researcher selected Bandura's Social Cognitive Theory (Bandura 2000) as a theoretical framework to structure this study. Bandura argued that behaviour is determined by the interaction of three main factors: *goals, self-efficacy, and outcome expectancies* (Bandura 1982). During the last decade, the socio-structural factors were added to the original triad of the SCT (Bandura 2000).

**Table 1: Definitions of the main constructs of the interplays between the individual, behaviour and environment (Source: McAlister et al 2008).**

| <b>Constructs</b>             | <b>Definitions</b>  |
|-------------------------------|---|
| <b>Reciprocal determinism</b> | It refers to the influence of the environmental factors to individuals and groups in one side, and the influence of the individuals and groups on their environments and the individuals' self-regulation of their own behaviour. |
| <b>Outcome expectations</b>   | The beliefs about the likelihood and value of the consequences of behavioural choices.  |
| <b>Self-efficacy</b>          | The beliefs about personal ability to perform behaviours that bring desired outcomes.   |
| <b>Collective efficacy</b>    | The beliefs about the ability of a group to perform concerted actions that bring desired outcomes.  |
| <b>Observational learning</b> | The learning of new behaviours by exposure to interpersonal or media displays of them, particularly through peer modelling.   |
| <b>Incentive motivation</b>   | It refers to the use and misuse of rewards and punishments to modify behaviour.   |
| <b>Facilitation</b>           | The provision of tools, resources, or environmental changes that make new behaviours easier to perform.   |
| <b>Self-regulation</b>        | It refers to self-control through self-monitoring, goal-setting, feedback, self-reward, self-instruction, and enlistment of social support.   |
| <b>Moral disengagement</b>    | It refers to ways of thinking about harmful behaviours and the people who are harmed that make infliction of suffering acceptable by disengaging self-regulatory moral standards  |



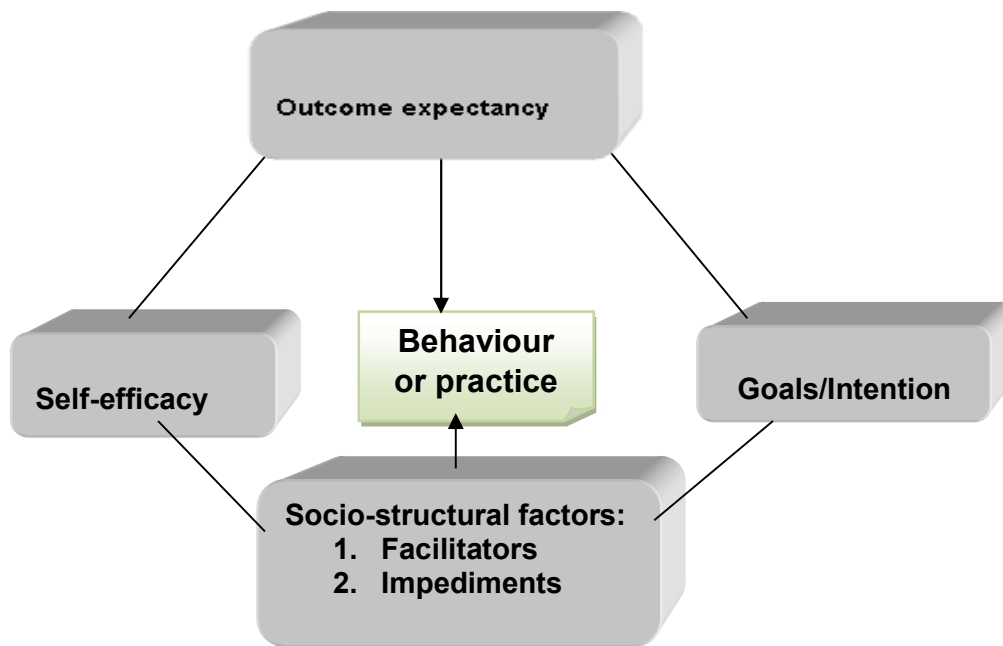
Social Cognitive Theory is the most common theory that has been successfully used to predict various health behaviours. However, many of these studies used one or two components of the SCT.

In Bandura' Social Cognitive Theory, *goals* are defined as plans to acts or intentions to perform a behaviour. While *outcome expectancy* refers to the value attached to the anticipated results/consequences of a person's behaviour. Based on the expected outcome of the behaviour, outcome expectancies are divided into physical, social, and self-evaluative.

*Self-efficacy* refers to the individual's beliefs in his/her capabilities to successfully perform behaviour. It is usually assessed as the degree of confidence that an individual has that she/he could still perform the behaviour in the face of various factors.

Finally, *socio-structural factors* refer to factors that facilitate or inhibit the execution of behaviour. In relation to health behaviour, these factors may include living conditions, health systems, political, economic, or environmental systems (Bandura 2000; Tokat, Okumus, and Dennis 2008).

Self-efficacy, outcomes expectancies along with intentions (goals) have been identified as the most important predictors of a range of health behaviours in various studies (Schwarzer and Luszczynska 2005). In this study, the researcher used all four components (goals/intentions, outcome expectancies, self-efficacy, and socio-structural factors) as illustrated in Figure 1 with the view of determining the social-cognitive predictors of exclusive breastfeeding practices and assisting in developing promotion strategies. The application of this theory in this study is illustrated in Chapter two of the report.



**Figure 1: Bandura's Social Cognitive Theory**

## 1.7 DEFINITION OF KEY CONCEPTS

**Breastfeeding:** The concept breastfeeding refers to the feeding of an infant or young child with breast milk directly from female human breasts via lactation (breastfeeding) rather than from a baby bottle or other container (Tönz 2000).

**Breastfeeding intentions or goals:** The concept of intention or goal in social cognitive theory refers to the plans to acts or intentions to perform behaviour. This intention is affected by attitude toward the behaviour, subjective norm, and perceived behavioural control (Schwarzer & Luszczynska 2005:141).

**Breastfeeding Practice:** The concept breastfeeding practice refers to the actual process and methods followed by mothers to breastfeed their infants and young children (WHO 2002).

**Breastfeeding Outcome Expectancy:** The concept outcome expectancy refers to mothers' beliefs about the results of breastfeeding and their perceived value of those results (McAlister, et al 2008:172).

**Breastfeeding Self-efficacy:** Breastfeeding self-efficacy refers to a mother's beliefs and confidence in her capabilities to successfully breastfeed her infant and young child (Pennsylvania State University 2011).

**Health promotion:** It is defined by WHO as the process of enabling people to increase control over, and to improve their health. It is an essential intervention as it effectively addresses public health problems. It also promotes healthy behaviours and empower individuals, families, households and communities to take necessary action and reinforce desired structural changes through policies, legislation and regulations (WHO 2013c).

**Socio-structural factors:** These are social and environmental factors that positively or negatively affect mother's breastfeeding practices (McKiney & Hyde 2004).

## 1.8 OPERATIONAL DEFINITION OF KEYS CONCEPTS

Exclusive breastfeeding and prenatal social cognitive breastfeeding behaviour were the main variables of this study. Exclusive breastfeeding was the dependent variable, while the prenatal social cognitive breastfeeding behaviour was the independent variable.

**Exclusive breastfeeding:** As a dependent variable, exclusive breastfeeding was defined as the feeding of breast milk to an infant or young child while giving no other food or liquid, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines (WHO 2002). It was measured in terms of the mothers' actual breastfeeding practice from the first hour post-delivery up to five months. The measurement variables included the time of initiation and methods of feeding.

**Prenatal social cognitive breastfeeding behaviour:** Prenatal social cognitive breastfeeding behaviour as independent variable consisted of four co-variables: breastfeeding intentions, breastfeeding outcome expectancy, breastfeeding self-

efficacy, and breastfeeding socio-structural factors. All these four independent co-variables to prenatal social cognitive breastfeeding behaviour are operationalised in Figure 2 at the end of Chapter two.

## **1.9 ETHICAL STATEMENT**

The study was conducted within the universal ethical principles (respect for person, beneficence, non-maleficence, and justice). The researcher adhered to the ethics guidelines for postgraduate research prescribed by the University of South Africa and the department of Health Studies and the Ethiopian guidelines.

The process of data collection started after the ethical clearance and the institutional permission. Participants were given enough information to allow them to take an informed decision. Each participant signed a consent form before data collection.

## **1.10 STRUCTURE OF THE REPORT**

The report is divided into six chapters, as outlined below:

*Chapter One:* An overview of the study in terms of background and rationale, statement of the research problem, purpose and objectives of the study, significance of the study, theoretical foundation of the study, definition of key concepts, and an overview of the methodology.

*Chapter Two:* Literature review with a focus on breastfeeding practices and issues associated with breastfeeding practices.

*Chapter Three:* Research methodology looked at the design, sampling methods and procedures, methods of data collection and analysis as well as issue of internal and external validity and strategies development process.

*Chapter Four:* Presentation and discussion of the research findings of phase 1 of the study.

*Chapter Five:* Presentation and description of the social-cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Ethiopia.

*Chapter Six:* Conclusions and recommendations.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 INTRODUCTION**

The chapter on literature review starts with a contextual overview of Ethiopia as a country and its health care delivery system and continues with the breastfeeding practices and policies, the relationships between social cognitive theory and the promotion of breastfeeding, and an illustration of the application of the social cognitive theory in the context of this study.

#### **2.2 CONTEXTUAL OVERVIEW**

##### **2.2.1 The Country**

Ethiopia is located in the north-eastern part of Africa, and has a total surface area of approximately 1.1 million square kilometres. The country is land-locked and is sharing a border with six countries: Eritrea and Sudan in the north, Djibouti and Somalia in the east, Kenya in the south and South Sudan in the west. It is the second most populous sub-Saharan African country, with a population of about 84 million with 2.6% annual growth rate. About 83.6% of the population lives in rural areas with an average national household size of 4.7 and the illiteracy rate for adult females at 77% (WHO 2013a).

Ethiopia consists of nine self-governing regional states (Afar, Amhara, Benshangul-Gumaz, Gambella, Harari, Oromia, Somali, Southern Nations Nationalities and People, Tigray) and two administrative cities (Addis Ababa and Dire Dawa). The administrative city of Addis Ababa covers an area of approximately 526.99 square kilometres with a density of 5,535.8 people per square kilometre. It has an estimated total population of 2,917,295. Report indicates that 34.6% of the total population consists of women of the reproductive age (CSA 2007). The total population of Addis Ababa is projected to reach 12 million within 20 years. Administratively, the regional states and the two administrative cities are divided into districts and kebeles (the smallest administrative unit in Ethiopia).

The decentralisation of power to regional governments and local communities is the basis for all types of public service delivery. This approach is believed to bring closer community participation at a grass-roots level (WHO, 2013a).

### **2.2.2. Health Care Delivery and Health Indicators**

The Ethiopia's health care delivery system is decentralised and organised around three levels of health care delivery. The first level known as a *woreda* or district health system or primary health care unit (PHCU) comprised of a primary hospital with a catchment area of 60,000-100,000 people, health centres each deserving 15,000-25,000 population and satellite health posts deserving 3,000-5,000 population. These structured are connected to each other by a referral system.

The second level consists of general referral hospitals covering a population of 1-1.5 million people each; and the third level comprised of specialised referral hospital covering a population of 3.5-5 million people (FMOH 2010). According to the 2012 report of the Federal Ministry of Health, Addis Ababa accounts for 11 public and 34 private hospitals, and 50 health centres; with the ratios physician to population of 1:2225, health officers to population of 1:9187, nurse-midwife to population of 1:21,118, and nurse to population ratio of 1:965 (FMOH, 2012).

Although there have been major health improvements recently, Ethiopia still has high morbidity and mortality rates and overall health status remains relatively poor. According to the 2012 health and health related indicators (FMOH, 2012), life expectancy is 59 years (58.4 years for males and 60.4 for females). The latest report (UN & WHO 2014) suggests that Ethiopia's has an under-five mortality rate and maternal mortality ratio of 68 per 1000 live births and 420 per 100,000 live births respectively, the life time risk of maternal death among women of reproductive age group of one in 52 mothers, a total fertility rate of 4.6 per women, and the adolescent birth rate of 87 per 1000 girls. The same report indicated that the rates of: 52% for family planning coverage, 19% for focused antenatal care

attendance, 10% for skilled-delivery, and 7% for postnatal care attendance; and 29% of under-five year old children underweight (UN & WHO 2014).

According to the health and health related indicators (FMOH, 2012:23), Addis Ababa has a total fertility rate of 1.5, a crude birth rate of 23.3 per 1000 populations, and crude death rate of 6.3 per 1000 population. The infant and under five mortality rates during the same year were at 40 and 53 per 1000 live births respectively, with 22.1 and 3.3% of children under three years moderately and severely malnourished (FMOH 2012).

### **2.3 BREASTFEEDING PRACTICES AND POLICIES**

The practices of feeding a child with breast milk direct from the breast or expressed are often defined in terms methods, time of initiation and duration. These variables are associated with various terms such as bottle-feeding, complementary feeding, cup-feeding, early cessation of breastfeeding, exclusive breastfeeding, full breastfeeding, median duration of breastfeeding, optimal infant and young child feeding, and replacement feeding (WHO 2002). Table 2 provides the glossary of terms related infant and young child feeding practices.

HIV and AIDS pose a great challenge in breastfeeding practices. Although breastfeeding is the norm throughout most of sub-Saharan Africa and many other parts of the world, there are challenges in linking breastfeeding HIV positive mothers with needed services and support at both the facility and community levels (UNAIDS 2012). In 2013, it was estimated that half of all new episodes of HIV transmission to children around the world occur during the breastfeeding period when the majority of lactating women are not receiving the prophylaxis necessary to prevent HIV transmission (USAIDS 2013).

Evidence shows that the decision-making on infant feeding was not only based on knowledge about medical risks, but also on the social risks regarding disclosure, rejection and stigma experienced by HIV positive mothers (Leshabari et al 2007). In developing countries, most HIV positive mothers practiced exclusive formula



feeding, and mixed feeding; contributing for the low rate of EBF as well as high risk of mother to child transmission of HIV (Olatona, Ginigeme, Roberts & Amu 2014).

**Table 2: Glossary of Infant and Young Child feeding Practices (Sources: WHO 2002)**

| <b>Concepts</b>                                     | <b>Definition</b>  |
|---|--|
| <b>Bottle-feeding</b>                               | Feeding an infant from a bottle, whatever is in the bottle, including expressed breast milk, water, formula, etc.  |
| <b>Complementary feeding</b>                        | The process of giving an infant food in addition to breast milk or infant formula, when either becomes insufficient to satisfy the infant's nutritional requirements. The practice of giving complementary foods.  |
| <b>Cup-feeding</b>                                  | Feeding from an open cup without a lid, whatever is in the cup   |
| <b>Early cessation of breastfeeding</b>             | Stopping breastfeeding sooner than is usually recommended in order to reduce the risk of transmitting infection.   |
| <b>Exclusive breastfeeding</b>                      | Breastfeeding while giving no other food or liquid, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.  |
| <b>Median duration of breastfeeding</b>             | The age in months when 50% of children are no longer breastfed.  |
| <b>Optimal infant and young child breastfeeding</b> | Exclusive breastfeeding for the first six months of life. Thereafter, infants are given nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond.  |
| <b>Replacement breastfeeding</b>                    | The process of feeding a child who is not receiving any breast milk with a diet that provides all the nutrients the child needs until the child is fully fed on family foods. During the first six months this should be with a suitable breast-milk substitute. After six months it should be with a suitable breast-milk substitute, as well as complementary foods made from appropriately prepared and nutrient-enriched family foods. |

Studies conducted in Ethiopia (Maru & Haidar 2009) and Malawi (Kafulafula, Hutchinson, Gennaro, Guttmacher & Kunitawa 2013) among HIV positive mothers

identified the mode of delivery and prenatal intention to breastfeed as predictors of EBF during the first six months.

The World Health Organisation document on 'Global Strategy for Infant and Young Child Feeding' (WHO 2002) urged national governments of Member States to adopt comprehensive policies on infant and young child feeding. In relation to breastfeeding, national governments were urged to develop policies that:

- *Provide health workers in health services and communities with the skills and knowledge necessary to provide counselling and support related to breastfeeding, complementary feeding, and HIV and infant feeding, and to fulfil their responsibilities under the International Code of Marketing on Breast-milk Substitutes.*
- *Ensure that the International Code of Marketing on Breast-milk Substitutes and subsequent World Health Assembly resolutions are implemented within the country's legal framework and enforced.*
- *Promote maternity protection legislation that includes breastfeeding support measures for working mothers; including those employed both in the formal and informal economy (WHO 2002:13-15)*

The global strategy also included a set of recommendations to guide healthcare professionals in promoting breastfeeding among HIV positive mothers. Table 3 summarises those recommendations.

In response to the World Health Organisation *Global Strategy for Infant and Young Child Feeding* (WHO 2002), the Ethiopian Federal Ministry of Health and Family Health Department developed a National Strategy for Infant and Young Child Feeding (FMH&FHD 2004), which included an Essential National Actions package with seven areas.

The promotion of optimal breastfeeding was one of the seven areas. Table 4 provides a summary of breastfeeding guidelines and recommendations as outlined in the 2004 National Strategy for Infant and Young Child Feeding. The Ethiopian

National Strategy adopted similar strategies described by WHO for the HIV positive mothers (see Table 3).

**Table 3: WHO Guidelines for HIV and infant feeding for healthcare professionals (Source: WHO 2002)**

| Situation   | Guidelines for healthcare professionals   |
|---|---|
| <b>Mother' unknown HIV status</b>                               | <p>Promote availability and use of HIV testing and counselling</p> <p>Promote breastfeeding as safest infant feeding method (exclusive breastfeeding for first 6 months, introduction of appropriate complementary foods at about 6 months, and continued breastfeeding to 24 months and beyond)</p> <p>Counsel the mother and her partner on how to avoid exposure to HIV.</p>   |
| <b>HIV-negative mother</b>                                      | <p>Promote breastfeeding as safest infant feeding method (exclusive breastfeeding for first 6 months, introduction of appropriate complementary foods at about 6 months, and continued breastfeeding to 24 months and beyond)</p> <p>Counsel the mother and her partner on how to avoid exposure to HIV</p>   |
| <b>HIV-positive mothers (all)</b>                               | <p>Provide anti-retroviral drugs to prevent MTCT</p> <p>Guide the mother to choose the most appropriate infant-feeding option, according to her own situation</p> <p>Counsel mother on the risks and benefits of various infant-feeding options, including the acceptability, feasibility, affordability, sustainability and safety of the various options</p> <p>Counsel mother on infant feeding after six months</p> <p>Refer the mother to family planning and child care services, as appropriate.</p> |
| <b>HIV-positive mothers who choose to breastfeed</b>            | <p>Support the mother in planning and carrying out a safe transition from exclusive breastfeeding to replacement feeding</p> <p>Promote safer breastfeeding (exclusive breastfeeding with early cessation when replacement feeding is acceptable, feasible, affordable, sustainable and safe)</p> <p>Prevent and treat breast conditions of mothers. Treat thrush in infants.</p>   |
| <b>HIV-positive mothers who choose other breast milk option</b> | <p>Provide support to the mother to carry-out her option as safely as possible.</p>   |
| <b>HIV-positive mothers who choose replacement feeding</b>      | <p>Provide the mother with the skills to carry out her choice</p> <p>Support her in her choice (including cup-feeding, hygienic preparation and storage, health care, family planning services).</p>  |

**Table 4: Ethiopian Guidelines on Promotion of Breastfeeding (Source: Ethiopian National Strategy on Infant & Young Child Feeding 2004)**

| <b>Guidance</b>   | <b>Recommendations</b>   |
|---|--|
| <b>Breastfeeding:<br/>0 to 6 months</b>   | Initiate breastfeeding within one hour after birth   |
|   | Promote feeding of colostrum and discourage prelacteal feeding                                 |
|   | Practice exclusive breastfeeding from 0 to 6 months  |
|   | Provide adequate care and support to lactating mothers   |
| <b>Complementary feeding: 6 to 24 months and beyond</b>   | Maintain breastfeeding up to two years of age, and continue on demand beyond                   |
|   | Practice responsive feeding  |
|   | Complementary foods should be safely prepared and stored                                       |
|   | Adequate amount of food to the child age   |
|   | Ensure food consistency  |
|   | Ensure meal frequency and energy density   |
|   | Ensure adequate nutrient content of complementary foods  |
|   | Vitamin mineral supplements or fortified products be used by the infant and mother when needed |
|   | Continue feeding during illness and feed more after illness                                    |
|   | <b>Facility providing maternity care services and care for new born infants</b>                |
| Train healthcare staff in the implementation of the policy  |  |
| Inform all pregnant women about the benefits and management of breastfeeding                                      |  |
| Help mothers initiate breastfeeding within a half-hour of birth   |  |
| Show mothers how to initiate and maintain breastfeeding even if they are away from their infants                  |  |
| Give new-born infants no food or drink other than breast milk, unless medically indicated                         |  |
| Practice room-in to allow mothers and infants to remain together 24 hours a day                                   |  |
| Encourage breastfeeding on demand   |  |
| Give no artificial teats or pacifiers to breastfeeding infant   |  |
| Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital |  |

## **2.4 SOCIAL COGNITIVE THEORY AND PROMOTION OF BREASTFEEDING**

According to the World Health Organisation (WHO 1986), health promotion is the process of enabling people to increase control over, and to improve, their health. This study was based on the assumption that breastfeeding is a human behaviour that should be viewed as a product of multiple influences, and one significant source of influence is the web of interactions people have with others within their social circles (Lewallen 2006; Cancer Institute 2005:23-16). This section of the literature focused on evidence related to relationships between Bandura (2000) social cognitive theory and breastfeeding practices.

### **2.4.1 Intentions/goals and Breastfeeding**

The construct intention or goal in social cognitive theory refers to the plans to acts or intentions to perform behaviour. This intention is affected by attitude toward the behaviour, subjective norm, and perceived behavioural control (Schwarzer & Luszczynska 2005:141).

With regard to the promotion of breastfeeding behaviour, the predictive strength of breastfeeding intention as a social cognitive variable is attributed to socio-demographic and cognitive factors that are viewed as determinants of the intention to breastfeed. These factors include among others, mother's age and education level, family household income, number of children, mother's knowledge about benefits of breastfeeding, previous breastfeeding experience, and attitude towards breastfeeding (Al-Akour 2010; Mitra, Khoury, Hinton and Carothers 2004; Leung, Tam, Hung, Fok & Wong 2003; McInnes, Love & Stone 2001).

In Ireland, mothers' breastfeeding experiences (having been breastfed as a child and/or seeing someone breastfeeding in the family) and attitude were significantly correlated to the intention to breastfeed, the early initiation and exclusive breastfeeding practices (Giles, Connor, McClenahan & Mallet 2010).

In Jordan, positive attitude towards breastfeeding among university students increased the likelihood of breastfeeding (Al-Ali, Hatamleh & Khader 2012). In Sydney, antenatal care attendance and positive health-care team attitudes were associated with improved breastfeeding intentions and behaviours among women (Kervin, Kemp & Pulver 2010).

In Syria and Jordan, the intention to breastfeed was higher among women with secure monthly family income, younger than 25 and primiparous or having one child, less educated, and not living with their family in-law compare to those who with insecure source of income, highly educated, living with their family in-laws and older than 25 years (Al-Akou et al 2010). Other authors (Scott, Shaker & Reid 2004) found maternal breastfeeding attitude to be a stronger predictor of feeding choices than demographic factors.

Studies (Awi, and Alikor 2006; Ibadin, Ofili, Monday & Nwajei 2013) have shown that younger mothers (age less than 25years) and those with high socio-economic class are more likely to initiate early breastfeeding than older mothers (more than 25 years) and mothers of low socio-economic group. On contrary, an Italian study showed that older and employed women are more likely to initiate breastfeeding timely than younger and unemployed women (Kambale and Falconara 2011: 508-517).

In Saudi Arabia, timely breastfeeding was positively associated with mothers living in rural areas, the absence of breast problems, and the parity of two or more (El-Gilany et al 2012). Studies looking at the determinants of timely initiation of early breastfeeding in Ethiopia and Tanzania showed that the initiation of breastfeeding within the first hour after birth was significantly lower among mothers who were from poorest households background and uneducated, who were residing in rural areas, who did not attend antenatal care and delivered at home, and those who delivered by caesarean section and had no autonomy in decision making (Setegn, Gerbaba, and Belachew 2011; Victor, Baines, Agho and Dibley 2012).

Knowledge of the benefits of breastfeeding as a determinant of the intention to breastfeed is a significant predictor of breastfeeding practices and strongly correlated to breastfeeding confidence and actual duration of breastfeeding (Chezem, Friesen, & Boettcher 2002). In Papua New Guinea, poor knowledge regarding the benefits of breastfeeding over infant formula among women was associated with poor exclusive breastfeeding practices for the first six months postpartum (Kuzma 2013).

It is further argued that breastfeeding knowledge alone is not enough to promote optimal breastfeeding practices. For example, Saied, Mohamed, Suliman, and Al-Anazi (2013) found that despite good knowledge regarding breast feeding's health benefits for baby and mother among mothers in Saudi Arabia, several barriers prevented women from breast feeding their children.

However, few studies found direct association between intention to breastfeed and the actual breastfeeding behaviour. Tarrant, Younger, Sheridan-Pereira, White, and Kearney (2009) found breastfeeding intention to be a significant predictor of infant feeding method. Authors (Loke & Chan 2013) found the mother's intended breastfeeding duration to be a strong predictor of exclusive breastfeeding at six weeks postpartum, and significant correlations between early postpartum breastfeeding intention and actual breastfeeding duration.

#### **2.4.2 Outcome expectancy and Breastfeeding**

Outcome expectancy within the social cognitive theory is defined as “beliefs about the likelihood of various outcomes that might result from the behaviours that a person might choose to perform, and the perceived value of those outcomes” (McAlister, et al 2008:172). It is an important predictor of breastfeeding practices and operates in concert with perceived self-efficacy, both of which contribute substantially to the formation of an intention (Schwarzer & Luszczynska 2005:142).

### **2.4.3 Self-efficacy and Breastfeeding**

The concept of self-efficacy in Social Cognitive Theory refers to “beliefs about the likelihood of successfully completing a task or goal” (Pennsylvania State University 2011). It assesses “people’s beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over events in their lives” (Wood & Bandura 1989:364). It is argued that one’s belief in the likelihood of goal completion can be motivating in itself. Self-efficacy is directly related to health behaviour, but it also affects health behaviours indirectly through its impact on goals/intentions (Schwarzer & Luszczynska 2005).

According to Bandura (1982), self-efficacy consists of a person’s beliefs or judgements about her/his capability to perform tasks or to influence the quality of functioning and the events that affect her/his life. Self-efficacy beliefs contribute to how individuals judge their abilities to perform specific behaviours and greatly influence their choices of and resilience in those behaviours (Dennis & Faux 1999). The basic principle behind self-efficacy theory is that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those they do not (Van der Bijl & Shortridge-Baggett 2002). Self-efficacy functions as a self-fulfilling prophecy as people behave in the way that reflects their initial beliefs (Gecas 2004).

Individuals with high self-efficacy beliefs are more likely to master behaviours than those individuals with low self-efficacy beliefs. This phenomenon occurs because individuals with low self-efficacy tend to avoid situations that stress their capabilities; in situations presenting barriers to performance attainment, inefficacious individuals tend to give up quickly. In contrast, highly efficacious individuals are more likely to initiate new behaviours and continue in their attempts until mastery is achieved (Ashford & LeCroy 2010).

With regard to the promotion of breastfeeding, self-efficacy beliefs were identified as a predictor of exclusive breastfeeding among women in Quebec, Canada (Semenic et al 2008). In Nigeria, studies conducted among female healthcare workers and



undergraduate students associated negative beliefs (breastfeeding is shameful, breastfeeding in public is unacceptable) to the lack of breastfeeding for a longer period (Anyanwu, Ezeonu Ezeanosik & Okike 2014; Ogunba & Agwo 2014).

In Ghana, mothers' perceptions and certain cultural practices (perceived lack of breast milk within the first hours post-delivery, the beliefs that mothers and the new-borns need rest after birth, breast milk should not be given to a new-born if she/he is not crying for milk, and performing post birth activities such as bathing) were identified as the major reasons for delaying timely initiation of breastfeeding (Tawiah-Agyemang, Kirkwood, Edmond, Bazzano & Hill 2008).

#### **2.4.4 Socio-structural factors and Breastfeeding**

Mothers' feeding choices could be shaped by the structural contexts of women's lives as much as personal attitudes (McKinley and Hyde, 2004). These socio-structural factors include family and partners support, access to and length of maternity leave, flexibility in working conditions, social and health facility supports, and residence (Lewallen et al 2006).

Type of delivery and the quality of prenatal care have been also associated with early breastfeeding. It was found that delivery in a health facility and supporting staff are facilitating factors for early initiation of breastfeeding (Tawiah-Agyemang et al 2008). Authors in Nigeria found that breastfeeding advice during postnatal period to be positively associated with early initiation of breastfeeding (Agu and Agu 2011: 39-44). Besides, Awi and Alikor (2006) states that early contacts between the mother and new born as well as assistance from health workers were the most important predictors of early initiation of breastfeeding (Awi and Alikor 2006:57-64)

Health care providers' information and support to pregnant and lactating mothers regarding breastfeeding is the other socio structural factors that significantly affect mother's breastfeeding practices. Authors advocate for the integration of optimal breastfeeding into the maternal and child health interventions (Belay & Haidar 2014).

In Israel, the lack of this integration was attributed to low breastfeeding among women. A study conducted among physician in Israel showed that 90% of family physicians agreed that breastfeeding is the best feeding method for infants but less than 20 percent of them discuss breastfeeding with pregnant women, and less than 30 percent of discuss it with women during the postnatal period (Nakar, Peretz, Hoffman, Grassman, Kaplan & Vinker 2007).

Brown and Davis (2014) found that women who have strong social support from their partner are more likely to initiate and continue breastfeeding. Two longitudinal infant feeding studies in Perth, Australia showed that women who perceived their husbands to prefer breastfeeding were more likely to be exclusively breastfeeding, than women who perceived their husbands to prefer formula feeding (Scott et al 2006).

## **2.5 CONCLUSION**

The literature reviewed highlighted the importance of breast milk and exclusive breastfeeding in the first six on the growth and development of infants as well as the well-being of the mother. It also showed that the association between the breastfeeding and certain social cognitive variables. Despite the facts that these studies have associated certain social-cognitive variables to breastfeeding practices, the predictive strength of association of the influence of the combined social cognitive and environmental variables on the early initiation of and exclusive breastfeeding practices were not clearly documented in the literature.

Finally, the review assisted the researcher to develop more insight on how to apply Bandura' (2000) social cognitive theory in this study. Figure 2 provides an illustration of Bandura (2000) SCT in this study.

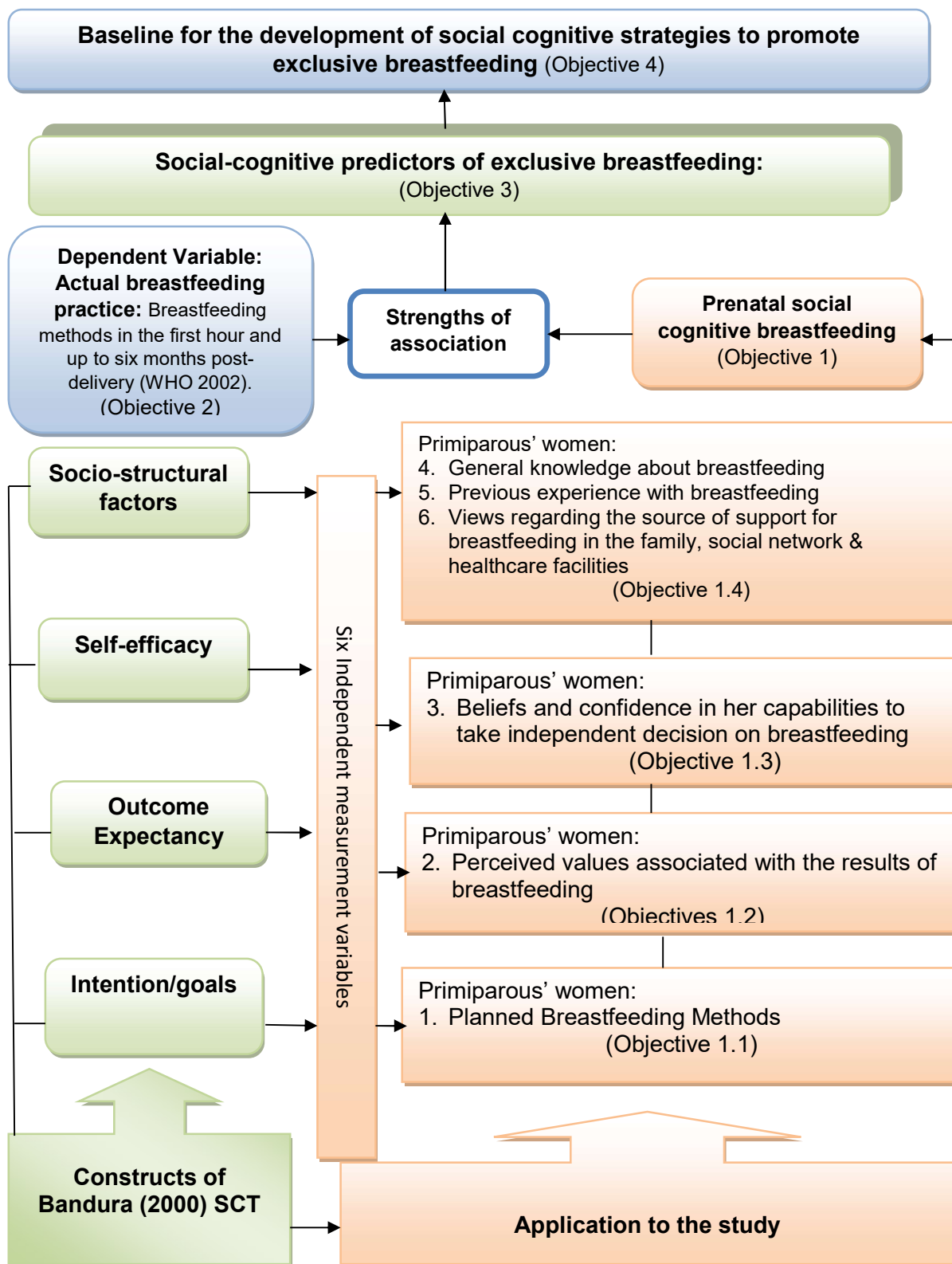


Figure 2: Illustration of the application of Bandura (2000) SCT in this study

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 INTRODUCTION**

This study was carried out in two phases. This chapter describes the methodology followed in both phases of the study. It includes the methodological foundation, the design, the setting, the study population, sample and sampling, data collection instruments and methods, data analysis, and ethical considerations. A summary of the research process is provided at the end of the chapter.

#### **3.2 METHODOLOGICAL FOUNDATION**

The study was carried out within the quantitative positivist paradigm. Quantitative approach is appropriate in situations where there is pre-existing knowledge about the phenomenon of interest. Research within this approach focuses on measuring quantities and relationships between attributes or variables under controlled conditions, using standardized data collection instruments (Pearson, Field and Jordan 2007:42-45). Further, quantitative approach requires the researcher to follow a set of sequential steps and to select a design which is more appropriate to the research questions (De Vos 2011).

A research paradigm is defined as a set of ideas (hypotheses) about the phenomena under inquiry. It consists of basic beliefs about the phenomena that concern a discipline (Bowling 2005:606). Positivist paradigm argues that knowledge is based on what can be observed and recorded rather than subjective understandings. The positivist paradigm typically involves collection of quantitative data, measurement of phenomena, seeking causal relationships between different aspects, and use of large data sets and statistical analysis (Matthews and Rose 2010:24-32).

It was against the above methodological foundation that this study was carried out. The researcher believed that exclusive breastfeeding practices among primiparous mothers are determined by social-cognitive variables. Those variables are objectives and quantitatively measurable.

Secondly, the researcher believed that those social-cognitive variables do not have the same predictive strength in terms of breastfeeding practices. Therefore, those with the highest predictive strengths (predictors) can be used to formulate strategies to promote exclusive breastfeeding among primiparous mothers.

Finally, the researcher believed that there are people with more knowledge (experts) regarding breastfeeding practices. These experts can make objective judgement on the potential of the proposed strategies to promote exclusive breastfeeding among primiparous mothers.

### **3.3 APPROACHES**

The study was divided into two phases with each phase focussing on one main research question. Different designs were used in the study knowing that the two phases of the study were rooted on the quantitative positivist paradigm and each intending to answer a specific question.

The first phase used a quantitative longitudinal prospective approach to determine the social-cognitive predictors of exclusive breastfeeding within the first six months post-delivery among primiparous mothers. The results of the first phase assisted the researcher to design social-cognitive strategies to promote exclusive breastfeeding among primiparous mothers using a Delphi survey.

### **3.4 PHASE ONE OF THE STUDY**

#### **3.4.1 Design**

The researcher used quantitative longitudinal, descriptive, exploratory and correlational designs to determine the predictors of the exclusive breastfeeding practices within the first six months post-delivery.

*In a quantitative longitudinal design, variables are measured at more than one point in time (Singh, 2007). In the context of this study, data were collected at three*

different points in time: at the last visit of the prenatal period, at the first 48 hours following delivery, and at six months post-delivery.

*In a quantitative descriptive design*, the researcher obtains information concerning the current status of the phenomena of interest in order to describe "what exists" with respect to variables or conditions in a specific situation or setting (Boslaugh 2008). Descriptive design may be used to generate hypotheses about possible cause and effect associations between variables. However, it may not be used to provide robust evidence about the direction of cause and effect relationships (Bowling 2009:216). In the context of this study, certain socio-economic variables were used to present an overall picture of the phenomenon of interest.

*A quantitative exploratory design* is mostly done to satisfy the inquisitiveness of the researcher as well as the desire to gain a deeper understanding of the phenomenon (Singh, 2007; Clark-Carter 2010; Babbie 2010). The researcher used this design to gain a deeper understanding of social cognitive breastfeeding behaviour among primiparous mothers at the prenatal period and the actual breastfeeding practices.

*A correlational design* allows the researcher to explore the relationships that exist between two or more variables. It assists the researcher to establish empirical relationships between two or more variables in showing if changes in one are associated with changes in the other or particular attributes of one variable are associated with particular attributes of the other (Babbie, 2010). In the context of this study, the correlational design assisted the researcher to determine the social-cognitive predictors of exclusive breastfeeding practices.

### **3.4.2 Setting**

The study was carried out at a public maternity national referral hospital in Addis Ababa. Six general public hospitals provide maternity care in Addis Ababa. The researcher selected the hospital with the highest number of antenatal care in the year prior to the data collection period. It is a public maternity national referral hospital (Gandhi Memorial Hospital) serves more than 500,000 populations in Addis

Ababa. The hospital accepts referrals from all parts of Ethiopia. It provides inpatient and outpatient including: ANC, delivery service, postnatal care, family planning, prevention from mother to child transmission of HIV (PMTCT), voluntary HIV Counselling and Testing (VCT), Antiretroviral Therapy (ART), gynaecological, emergency, pharmacy, laboratory, neonatology, as well as preventative, rehabilitative, and forensic care to victims of sexual assault (WFI 2012).

### **3.4.3 Study Population**

The terms study population, population of interest, target population or simply population are interchangeably used to mean the entire set of units to which findings of a study are to be generalized or all subjects possessing the common characteristics that are being studied. Study population is the actual population of people from whom the sample will be drawn, and the sampling units (or sampling elements) are the individual entities that are the focus of the study (Babbie 2010).

In this study, the target population referred to pregnant women in Addis Ababa, while the study population consisted of pregnant women attending ANC at the research setting. Primiparous pregnant women attending ANC at their last term of pregnancy at the research setting were the study units or study samples.

### **3.4.4 Sample Size**

Sample size determination is one of the important steps in the research process. Inappropriate sample size calculation may result in wasted resources or may lead to false results (Boslaugh & McNutt 2008). In descriptive study, the calculation of the sample size depends on the extent of the population estimation, the confidence interval, allowable error and the proportion of interest (CDC 1991: 159-160).

In this study, the researcher used the single proportion formula for calculating sample size. With  $n = [Z_{\alpha}^2 \times p \times (1-p)]/d^2$ ; at the 95% confidence interval (CI), allowable error (d) of 5% and early initiation of breastfeeding as proportion of interest, (p) and non-response rate of 5%. Considering, the rate of early initiation of

breastfeeding; which was 62% in the general population in Addis Ababa (CSA & ICF 2012), the calculated sample size was 380.

However, because of the small number of the study population during the six months pre-data collection period, the researcher used the finite population correction formula (fpc;  $n' = n / (1 + n/N)$ ) to adjust the sample size to 233 using 600 as an estimate population size during the reporting period.

The adjusted simple size was in line with the statistical theory which argued that if the size of the study population is large enough, the standard sample size formulas can be used. However, if the size of the study population is smaller than the minimum sample size, the finite population correction (fpc) must be applied to adjust the sample size, provided that the sample comprises more than 5% to 10% of the population (WHO 1990).

#### **3.4.5 Sampling Technique**

Non-probability purposive sampling was used to select the participants. Non-probability sampling is mostly used in situations where it is unlikely to create list of respondents from which study participants can be identified randomly as in the probability sampling or when probability sampling would not be appropriate (Singh 2007).

Non-probability sampling uses techniques such as purposive, quota, convenience and snowball (Bruce et al 2008). A convenience sampling is described as a sample in which elements have been selected from the study population on the basis of their accessibility or convenience to the researcher. It is based on the assumption that the members of the study population are homogeneous. That is, that there would be no difference in the research results obtained from a random sample, a nearby sample, a co-operative sample, or a sample gathered in some inaccessible part of the population (Bryman 2012).



The choice the non-probability purposive sampling was mainly due to the socio-demographic similarities of the clients attending ANC at the selected setting (WFI 2012) and the difficulty in constituting a sample frame for a probability sampling. All primiparous mothers at the last term of pregnancy and attending the last ANC during the study period were invited to participate in the study when they came to the selected hospital for ANC. Those who accepted to participate were recruited until the calculated sample size was reached. The same group of women were followed for six months post-delivery. However, at the second point of data collection (within the 48 hours post-delivery), participants who delivered still born babies and those who developed complications during delivery were excluded from the sample.

The final sample consisted of primiparous mothers who met the following criteria:

1. Attended ANC in Gandhi Memorial Hospital during the study period,
2. Accepted to participate in the study and to followed for six months post-delivery,
3. Did not deliver a still born baby,
4. Did not develop any complications during delivery and the six months thereafter, and
5. Was traceable after six months and willing to participate.

#### **3.4.6 Data Collection Instruments**

Structured questionnaire was used for data collection in the first phase of the study. The strength of a structured questionnaire relies on its ability to generate unambiguous and easy data to code and to quantitatively analyse. One of the weaknesses is that the pre-coded response choices may not be sufficiently comprehensive and not all answers may be easily accommodated (Bowling 2005:204). To overcome this limitation, the researcher tried to provide as many options as possible.

The questionnaire was designed with a combination of closed-ended questions and 5 points Likert Scales. These questionnaires were structured in to eight sections as described below and also in annexure 1 and annexure 2).

- I. **Section 1** comprised of eight open and closed-ended socio-demographic questions related to age, religion, educational status, employment status, and monthly family income.
- II. **Section 2:** comprised of four open and closed-ended questions related to breastfeeding intentions; such as mothers intended breastfeeding initiations, duration and options.
- III. **Section 3:** comprised of six breastfeeding outcome expectancy questions and all were on a 5-point Likert scale; where 5 = totally agree, 4= agree, 3= neither agree nor disagree, 2= disagree and 1 = totally disagree. Respondents were asked to rate their level of agreement or disagreement on each statement, and reverse scoring was done during analysis for items that were presented with incorrect statement.
- IV. **Section 4:** comprised of seven breastfeeding self-efficacy questions and all were on a 5-point Likert scale; where 5 = totally agree, 4= agree, 3= neither agree nor disagree, 2= disagree and 1 = totally disagree. Respondents were asked to rate their level of agreement or disagreement on each statement, and reverse scoring was done during analysis for items that were presented with incorrect statement.
- V. **Section 5:** comprised 18 open and closed-ended breastfeeding socio-structural questions. Nine questions were used to assess general breastfeeding knowledge on a 5-point Likert Scale. Four closed ended questions were used to assess previous experience with EBF. Five questions were used to assess views regarding the source of support for breastfeeding in a 5-point Likert scale; where 5 = totally agree, 4= agree, 3= neither agree nor disagree, 2= disagree and 1 = totally disagree. Respondents were asked to rate their level of agreement or disagreement on each statement, and reverse scoring was done during analysis for items that were presented with incorrect statement.
- VI. **Section 6:** comprised of four closed and open ended questions to assess infant feeding practices within the first hour post-delivery.

- VII. **Section 7:** comprised of four closed and open ended questions to assess infant feeding practices within the six months post-delivery.
- VIII. **Section 8:** comprises of six questions on a four point Likert Scale to evaluate the preliminary strategies to promote EBF among primiparous mothers in a 4-points Likert scale; where 4 = totally agree, 3= agree, 2= disagree and 1 = totally disagree.

The structured questionnaire was divided into two main parts. These sections were introduced with the interviewer identification code, the participant identification code, the instructions to the interviewers, and the screening information. The codes were assigned by the researcher. The participant code was linked to the contact details of the selected participants, while the interviewer code was linked to the list of the assigned participants. The screening information dealt with the interview date and time, language of the interview and specific issues related to each stage of data collection.

The first part of the questionnaire consists of five section (see Part A in Annexure 1), and was used during the first stage of data collection (section I to V). The first section looked at the socio-demographic data of the respondents. Sections II to V dealt with the six independent variables as illustrated in Figure 2.

The second part of the questionnaire consisted of two sections (see Part B in Annexure 1), and was during the second stage of the data collection, and consisted of two sections (section VI and VII).

### **3.4.7 Validity and Reliability of the Instrument**

#### **3.4.7.1 Validity of the instrument**

The researcher ensured both internal and external validity the instrument. Internal validity is defined as the degree to which an instrument measures what it actually claims to measure. It is classified into four categories: (i) face validity, (ii) content validity, (iii) criterion validity and (iv) construct validity (Bowling 2005).

Face validity refers to how an instrument looks to untrained individuals, while content validity is a subjective measure of how appropriate an instrument appears to reviewers who have some knowledge of the subject matter (Litwin 2003). Criterion validity is a measure of how well one instrument stacks up against another instrument or predictor, and provides much more accurate quantitative evidences on an instrument than face and content validity (Litwin 2003). Finally, construct validity; which is the most valuable, but yet is the most difficult to assess, is a measure of how meaningful an instrument is when in practical use (Litwin 2003: 31-43).

In this study, the researcher took specific steps to ensure internal and external validity of the research instruments. In this study, the researcher developed the study tools considering the purpose of the study and based on the literatures reviewed and an existing theory. The researcher borrowed some questions from breastfeeding self-efficacy scale (Dennis and Faux, 1999) and breastfeeding attitude scale (Wambach, 1997) to ensure criterion predictive validity for some of the constructs; breastfeeding self-efficacy and breastfeeding attitude, in the use of SCT.

Further, the researcher shared the data collection tools with the enumerators selected from the study hospital to get their feedback and ensure face validity of the tools. After incorporating comments from these enumerators, the researcher tested these data collection tools in 10 multiparous and 28 primiparous mothers (which is about 15 percent of the study participants), and modified the original tools using the lessons from the pre-test. The researcher finally shared the tools with an experienced researcher on the areas of SCT for expertise opinions and ensures the content validity before finalising the development of the final data collection tools.

External validity is more concerned with the generalizability of a study's results beyond the particular groups participating in the study. This implies that generalizability primarily concerns how well the study population represent other populations, and hence the researcher must identify biases and estimate how they may have distorted the study's findings (CDC 1991:132).

The researcher ensured external validity by minimising selection bias during the data collection period through clearly defined selection criteria; *primiparous mothers at the last term of pregnancy and attending their ANC in the study hospital*. Study populations had almost equal chance of being selected for the study, as all of them in the study hospital were invited for interview as they visit the study hospital during their last term of pregnancy for ANC.

Further, the researcher conducted regression analysis to control confounding variables that can influence the outcome of the study. External validity was further ensured by using a representative sample (233 primiparous mothers) for the study. Author (Bowling 2005) supports that representative study sample and a higher response rate allows inferences from the study sample to be generalised to the target population.

#### **3.4.7.2 Reliability of the instruments**

Cronbach's alpha coefficient is one of the most commonly used indicators of internal consistency, and ideally the Cronbach alpha coefficient of a scale should be above 0.7 (Pallant 2010).

Cronbach alpha values are, however, quite sensitive to the number of items in the scale, and with short scales (e.g. scales with fewer than ten items) it is common to find quite low Cronbach values of like 0.5. (Pallant 2010).

Thus the researcher conducted inter-item correlations of the instruments used to assess breastfeeding outcome expectancy, self-efficacy and socio structural factors. Table 5 shows Cronbach's alpha analysis results for breastfeeding outcome expectancy, self-efficacy and socio structural factors.

**Table 5: Internal validity test for breastfeeding outcome expectancy, self-efficacy and socio structural factors (N=141)**

| <b>Constructs</b>                                     | <b>Breastfeeding outcome expectancy</b> | <b>Breastfeeding self-efficacy</b> | <b>Breastfeeding socio-structural factors</b> |
|---|---|------------------------------------|---|
| <b>Cronbach's alpha coefficient</b>                   | 0.837                                   | 0.689                              | 0.779   |
| <b>Number of items/questions included in the test</b> | 6                                       | 7                                  | 14  |

As indicated above in Table 5, the Cronbach's alpha analysis showed that the instruments used to measure the primiparous mothers' prenatal breastfeeding outcome expectancy, self-efficacy, and socio structural factors are reliable.

### **3.4.8 Data Collection Methods and Process**

As stated earlier, data were collected at three different points in time: at the ANC visit, within the first 48 hours of delivery, and six months post-delivery.

Structured face-to-face interviews were used at the first point of data collection, which took place in the hospital (at the last visit of ANC. Structured telephone interviews were used to collect data within the first 48 hours post-delivery) and six months post-delivery. This method involves the administration of a well-structured questionnaire by an interviewer. It has the advantage of providing the respondents with exactly the same context of questioning (Bryman 2012).

The above interviews were conducted by five nurses with previous experiences in data collection. One of the common errors in using more than one interviewer in administering structured questionnaire is the interviewer variability, which occurs when the interviews are not well executed and the respondent' answers are not well captured (Bryman 2012). The researcher took specific steps to avoid or reduce such errors.

Five nurses were recruited and trained by the researcher before the commencement of data collection. The training consisted of theoretical and practical components. The theoretical component lasted four hours. It included a presentation regarding the following aspects of the research protocol: problem statement, the aim and objectives of the research, the design, data collection process and methods, data collection instruments, and ethical issues. This presentation was followed with open discussion.

With regard to the practical part of the training, each enumerator was given five questionnaires to administer to five pregnant women attending their last ANC visit at the research site. This exercise was aimed at assessing the ability of the enumerators to execute the interviews and to assert if all of them are asking questions and capturing the answers in the same manner. It also provided them the opportunity to familiarise with the instruments. The completed questionnaires were compared and the researcher was satisfied with the way the questionnaires were completed.

During the data collection period, each enumerator followed the same groups of primiparous mothers throughout of the three points of data collection.

The researcher coordinated the overall data collection processes and data management, and specifically checked for completeness, consistency and accuracy of the filled questionnaire on weekly basis. Those questionnaires found to have errors, inconsistent data and missed values were returned to the enumerators for clarifications and/or correction.

Besides; to ensure quality of data, each questionnaire was cleaned and coded before entered to a computer, and pre-analysis frequency table was done for selected variables before conducting in-depth analysis to check for consistencies across data.

#### **3.4.9 Data Analysis**

Data were analysed with the Statistical Packages for Social Sciences (SPSS) version 21. The researcher checked the completed questionnaire for completeness,

consistency and accuracy on weekly basis. The questionnaires of the respondents who did not participate to all three points of data collection were discarded from analysis. The duly completed questionnaires were clean, coded captured and subjected to descriptive and inferential statistical analysis by the researcher.

Descriptive statistics were used to describe the respondents' socio-demographic characteristics, their social-cognitive breastfeeding behaviours and actual breastfeeding practices. Descriptive statistics allow the researcher to describe a phenomenon by summarizing information in a way that highlights the important numerical features of the data by providing the general distribution of data, measures of central tendency, measures of dispersion, measures of position, and measure of association (Antonius 2013).

Inferential statistics were used to compare the primiparous mothers' prenatal breastfeeding behaviours with actual breastfeeding practices and to determine the predictors of exclusive breastfeeding. Inferential statistics are generally used for two purposes: tests for difference of means and test for statistical significances (Pallant 2010). Accordingly, the researcher used Spearman rank order ( $\rho$ ) correlation analysis to test any significant correlations between prenatal breastfeeding behaviours with actual breastfeeding practices after delivery.

### **3.5 PHASE TWO OF THE STUDY**

This phase focused on the second main research question, which looked at possible social cognitive strategies to promote exclusive breastfeeding practices among primiparous mothers in Addis Ababa, Ethiopia.

#### **3.5.1 Design**

A Delphi survey design was used to assist the researcher to develop the social-cognitive strategies to promote exclusive breastfeeding among primiparous mothers. It consisted of three rounds of mailed self-completion questionnaires. The Delphi was supported with critical review and synthesis of literature throughout the strategies' development process.



A Delphi Survey is a group communication process as well as a method of achieving a consensus of opinion associated with a specific topic. The rationale for Delphi technique is that more heads are better than one and that inputs generated by experts based on their logical reasoning are superior to simply guessing. The technique engages a group of identified experts in detailed examinations and discussions on a particular issue for the purpose of policy investigation, goal setting, and forecasting future situations and outcomes. Unlike common surveys which try to identify what is, the Delphi survey attempts to assess what could or should be (Hsu and Sandford 2010).

The key features of the Delphi survey are the use of a 'panel of experts', and a series of rounds during which the panel of experts is presented with information, usually in form of statements, and asked to make judgements or supply comments on items presented until the consensus is reached (Quin & Bonuck 2012).

### **3.5.2 Sampling and Sample**

Purposive sampling was used to select experts. An expert, in the Delphi context, is defined as a group or panel of 'informed individuals' or 'specialists' in their field who are willing to contribute their opinion to solve the problem at hand (Hsu & Sandford 2010).

A total of thirty-seven experts (thirty-two local and five international) constituted the Delphi panel for this study. The experts were selected on the basis of their expertise as health policy-makers, academics and researchers, service providers, and advocacy groups. The thirty-two local experts were selected from the national ministry of health and institute (five each from the Federal Ministry of Health, Addis Ababa City Administration Health Bureau, and Ethiopian Public Health Institute); two academics institutions (four from each university); service providers (one each from the six general hospital in Addis Ababa); and civil society groups (two from local civil society groups and one from an international non for profite organization based in Ethiopia). The five international experts were selected from the World Health Organisation (one each from WHO-Geneva, WHO-Afro and WHO-Country Office), and academics institutions (one each from two South African universities).

### **3.5.3 Data Collection Instruments**

Delphi survey usually makes use of statements with Likert Scale to seek consensus among the participants (Hsu & Sandford 2010). In this study, four points Likert Scales that range from strongly agree to strongly disagree were used to seek consensus among experts on a set of statements. Experts were requested to give score of 4 points for the statement they strongly agree with, score of point 3 for statements they agree with, score of point 2 for statements they disagree with and score of point 1 for statements they strongly disagree with. The statements were evaluated for their (1) specificity to promote EBF, (2) relevance to the Ethiopian context, (3) adaptability to the existing breastfeeding promotion programme, (4) acceptability to users and health care providers, (5) effectiveness to the promotion of EBF, and (6) comparability to international interventions (Matlakala 2012).

### **3.5.4 Development of EBF Promotion Strategies**

As stated earlier, the researcher used the results of the first phase of the study to develop the initial strategies which were submitted to the three rounds of Delphi. This initial stage involved a synthesis of the social-cognitive variables that showed positive association of exclusive breastfeeding among primiparous mothers and those with high statistical predictive values using the existing literature. The identified strategies were translated into statements, which were submitted to the panel of experts for evaluation through electronic mailing.

#### **3.5.4.1 First Round Delphi**

The first round of Delphi focused on seeking consensus among the local experts regarding the specificity and relevance of the proposed strategies. All statements which were regarded by 70% of the panel of local experts as specific to the promotion of EBF and relevant to promote EBF among primiparous mothers on Ethiopia were considered for the next round. These statements were enriched with the literature and submitted to the same local panel of experts for evaluation.

#### **3.5.4.2 Second Round Delphi**

A summary of the results of the first round and the enriched strategies were e-mailed to the panel of local experts to seek consensus regarding the adaptability and acceptability of the strategies. All statements which were regarded by 70% of the panel of local experts as adaptable to the existing breastfeeding promotion programme and acceptable to primiparous mothers and health care providers were integrated in the final development of the strategies.

#### **3.5.4.3 Third Round Delphi**

The third round of Delphi served to validate the proposed strategies. The researcher used the results of the second round of Delphi to finalise the strategies based on the consensus reached in round two. The document was then submitted to the five international experts for validation of their potential effectiveness and comparability with the international EBF promotion strategies.

#### **3.5.5 Data Analysis**

Delphi seeks consensus among the panel of experts. In this study consensus was established at 70% as cut off point for each item. The 70% was determined through summary descriptive statistics with SPSS version 21. Any item with a score of less than 70% was removed from the strategies development process.

### **3.6 ETHICAL CONSIDERATIONS**

The study was conducted within the universal ethical principles (respect for person, beneficence, non-maleficence, and justice) and the ethics guidelines for postgraduate research prescribed by the University of South Africa. The proposal of this study was approved for its scientific merit by the Higher Degree Committee of the Department of Health Studies and the ethical clearance to conduct the study was obtained from the Ethics Committee of the same department (see Annexure 3). Permission to conduct the study was also obtained from Gandhi Memorial Hospital (see Annexure 4). Nurses in charge of the ANC unit in Gandhi Memorial Hospital were also briefed on the purpose of the study, and oral consent was

obtained from them. The process of data collection started after the ethical clearance and the institutional permission.

The researcher adhered to the steps outlined in the approved proposal. The researcher maintained permanent contact with the supervisor and the final report was based on the collected data. The respondents were informed of the aim of the study, the questionnaire was anonymous and confidentiality was maintained throughout the research process. Participation was absolutely voluntary and all the participants were informed of their right to withdraw from the study with no penalty. The principle of beneficence and non-harm were guaranteed during the process. Each respondent in the study was treated fairly and the right to privacy was respected (principle of justice). The proposed study had no potential to cause physical or psychological harm to the respondents, and all respondent were more than 18 years old.

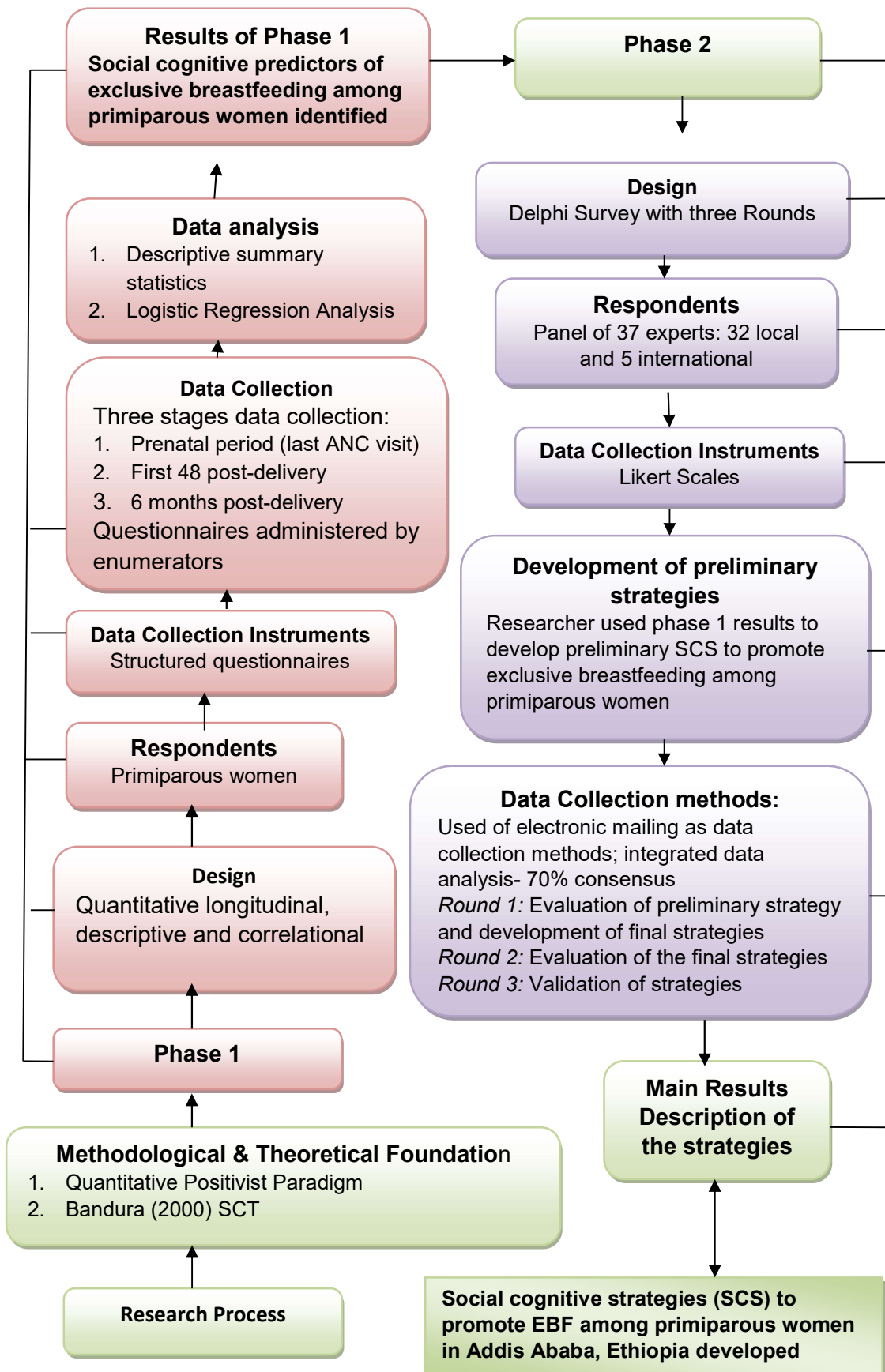
The researcher sought informed consent from each participant at each phases of the study, and ensured that study participants' participation in the study was based on their informed decisions as per the attached concept form. Names of study participants were recorded only for the follow up data collection purposes by the data collectors during stage 1 and stage 2 of phase 1.

### **3.7 SCIENTIFIC INTEGRITY OF THE STUDY**

The researcher considered this research topic as it is among the national priority areas in public health. Accordingly, the researcher set research objectives which in turn guided the development of the research methods. This means that development of the research methods and the subsequent analysis were based on standards, and the researcher followed strict standard research methods to address the research objectives. The researcher conducted the study to the highest level of ethical and professional standard so that the findings will benefit all study participants, institutions, the general population as well as the research community. The researcher also showed honesty and did not fabricate cases during analysis and write up of the study. The researcher also acknowledged all previous works and references this study cited.

### **3.8 CONCLUSION**

The third chapter provided the rational and motivation for the selected methodology. It also examined how data were processed in the study and how the ethical principles were observed. Figure 3 provides an illustration of the process followed to achieve the two main objectives of the study.



**Figure 3: Summary of the Research Process**

## **CHAPTER FOUR**

### **PRESENTATION AND DISCUSSION OF PHASE ONE MAIN FINDINGS**

#### **4.1 INTRODUCTION**

The fourth chapter deals with the presentation and discussion of the first phase of the study. As described in chapter three, the focus of the first phase was to determine the social cognitive predictors of exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia within the first six months post-natal period. It included the first three objectives of the study as described in Chapter One.

As described in chapter three, these objectives were addressed through quantitative longitudinal, descriptive and correlational designs. Data were collected in three stages in accordance to the above designs. In stage 1 of data collection, 232 (response rate of 99.6%) primiparous mothers were interviewed and this number moved to 208 (response rate of 89.6%) in stage 2 and 141 (response rate of 67.8%) in stage 3. Considering the main objective of this phase, the researcher conducted the final analysis on the 141 participants who successfully completed all three stages of data collection.

#### **4.2 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

The respondents were described in terms of age, marital status, religion affiliation, and highest level of education, employment status, household income, and the size of the household. Table 6 provides a summary of the respondents' socio-demographic characteristics.

Of the 141 respondents (100.0%), 138 (97.8%) were below 36 years old, 110 (78.0%) were Orthodox Christian, 6 (4.3%) did not have any formal education, 65 (46.1%) were unemployed, 131 (93.0%) were married, and 133 (94.3%) had an average family monthly income of US\$ 167.35.

In general, the respondents' age ranged from 17 to 40 years, and the mean age of the respondents were 25.82 (SD: + 3.76) years, while the median and mode of the respondents age were 26 and 25 years. Of the 131 married women, 91.5% (n=129) were living with their partners or spouses and 8.5% (n=12) were not living with their partner.

Of the 76 employed respondents (self, full-time and part-time), 53 (98.1%) reported having the right to maternity leave, which varied from two and six months.

**Table 6: Socio-demographic distribution of the respondents (N=141)**

| <b>Variables</b>                          | <b>Description</b>          | <b>Frequency</b> | <b>Percentage (%)</b> |
|---|-----------------------------|------------------|-----------------------|
| <b>1. Age</b>                             | Less than 25 years          | 69               | 48.9                  |
|   | 26-35 years                 | 69               | 48.9                  |
|   | 36 years and above          | 3                | 2.1                   |
| <b>5. Religion Affiliation</b>            | Orthodox Christian          | 110              | 78.0                  |
|   | Protestant Christian        | 23               | 16.3                  |
|   | Muslim                      | 8                | 5.7                   |
| <b>6. Highest Level of education</b>      | No formal education         | 6                | 4.3                   |
|   | Primary level               | 33               | 23.4                  |
|   | Secondary level             | 44               | 31.2                  |
|   | Post-secondary level        | 58               | 41.1                  |
| <b>7. Employment status</b>               | Not Employed                | 65               | 46.0                  |
|   | Self-employed               | 22               | 16.0                  |
|   | Employed (full or per time) | 54               | 38.0                  |
| <b>8. Marital status</b>                  | Married                     | 131              | 93.0                  |
|   | Single/ separated           | 10               | 7.0                   |
| <b>9. Estimated family monthly income</b> | Average of 3441.61 Birr     | 133              | 94.3                  |
|   | Did not know                | 8                | 5.7                   |

The socio-demographic characteristics of the respondents as presented are in line with the existing reports. The large proportion of orthodox Christians (78.0%), the marital status (93.0% being married), and the level of education (95.0% being educated) reflect the trend in the general population (CSA 2014).

The results also suggest that girls are delaying the starting of the family as shown by more than half (51.0%) being over 25 years while 93.0% of them were married. This delay can be attributed to the level of education (less than 5% were uneducated) and the financial independence with 54.0% of them being employed or



self-employed. In addition, reports suggest that with the improvements in family planning coverage and other reproductive health services, young girls are better equipped and most of them are delaying the age of starting their family (CSA & ICF 2012, CSA 2014).

Although 54.0% of respondents were employed or self-employed and married, their average family monthly incomes ( $\pm 2621.08$  Birr or 167.35USD) were less than the minimum average monthly incomes of the Ethiopian family estimated at 15,000 Birr (UNDP 2015). Lower family income could force particularly, unemployed women to seek paid job in order to support their family, and this could mean giving shorter time for optimal breastfeeding. Hence, general community empowerment and increasing family's economic status could be among the means to promote EBF together with other social and behaviour change communication strategies.

### **4.3 PRENATAL SOCIAL COGNITIVE BREASTFEEDING BEHAVIOUR**

This section refers to the first sub-objective. It was explored and described in terms of: (1) breastfeeding intentions/goals, (2) breastfeeding outcome expectancy, (3) breastfeeding self-efficacy, (4) breastfeeding socio-structural factors.

#### **4.3.1 Respondents' Prenatal Breastfeeding Intentions or Goals**

As illustrated in Figure 2, the respondents' prenatal breastfeeding intentions/goals were measured in terms of primiparous women's planned breastfeeding methods.

##### **4.3.1.1 Respondents' planned breastfeeding methods**

The respondents were asked about their plan to breastfeed. Those who had plan to breastfeed were asked three follow-up questions related to the methods, time of initiation, and duration for breastfeeding. They were requested to provide reasons for their choices as sub-questions.

##### *Planned breastfeed methods*

Of the 141 respondents, 138 (98.0%) had planned to breastfeed their children and 3 (2.0%) did not plan to breastfeed their children. Of the 138 (100%) respondents who expressed their intentions to breastfeed, 71 (51.4%) indicated that they will

exclusively breastfeed their children for six months and 67 (48.6%) indicated that they will use complementary breastfeeding.

#### *Initiation Time*

Of the 138 (100%) respondents intending to breastfeed, 96 (69.6%) indicated that they will initiate breastfeeding within the first hour post-delivery, 30 (21.7%) were not certain about the time they will initiate breastfeeding, 8 (5.8%) intended to initiate breastfeeding after an hour and 4 (2.9%) indicated that they will do it on the instruction of the healthcare professionals.

#### *Breastfeeding Duration*

The intended duration of breastfeeding varied between 4 to 48 months. Of the 138 (100%) respondents intending to breastfeed, 63 (45.7%) intended to breastfeed for 24 months, 30 (21.7%) for 6 months or less, 28 (20.3%) for 12 months, and 17 (12.3%) for more than 24 months.

### **4.3.2 Respondents' Prenatal Breastfeeding Outcome Expectancy**

Prenatal breastfeeding outcome expectancy was explored and described according to the perceived values attached to breastfeeding.

#### **4.3.2.1 Respondents' perceived values of breastfeeding**

Six statements were used to explore and describe the respondents' perceived values of breastfeeding. Each statement was evaluated with a Likert Scale ranging from totally agree (5) to totally disagree (1) with neither or nor being a mid-point (3). Items with incorrect statements were reverse-scored, and these five points were reduced into 3 points for analysis purposes. Totally agree and agree were analysed as agree, while disagree and totally disagree were analysed as disagree. Table 7 provides the frequency distribution of the descriptive analysis of the five statements.

**Table 7: Respondents' perceived values associated with breastfeeding (N=141)**

| Statements  | Frequency & Percentage (%) |             |             |
|---|----------------------------|-------------|-------------|
|   | Agree                      | Disagree    | Neither/Nor |
| 1. Breast milk will protect my child from illnesses or infections.  | 115<br>81.6%               | 13<br>9.2%  | 13<br>9.2%  |
| 2. Breastfeeding reduces the risk of excessive bleeding after delivery.   | 105<br>74.4%               | 15<br>10.7% | 21<br>14.9% |
| 3. Breast milk contains enough nutrients that my child requires during the first six months of her/his life.      | 112<br>85.1%               | 17<br>12.1% | 4<br>2.8%   |
| 4. Breastfeeding is economical as I can save money by given my child only breast milk during the first six months | 102<br>72.4%               | 34<br>24.1% | 5<br>3.5%   |
| 5. Breastfeeding will assist in strengthening the bond with my child.   | 117<br>83.0%               | 18<br>12.8% | 6<br>4.3%   |
| 6. My baby will be much better if I avoid adding liquids/food in the first six months                             | 117<br>83.0%               | 18<br>12.8% | 6<br>4.3%   |

As shown in Table 6, of the 141 respondents, 115 (81.6%) attributed breastfeeding to the protection of children from illnesses; 105 (74.5%) to the prevention of post-partum haemorrhage; 120 (85.1%) to the nutritional value of breast milk; 102 (72.3%) to economic gains associated to exclusive breastfeeding; 117 (83.0%) to bonding between the mother and the new-born; and 117 (83.0%) to the negative consequences of adding liquid or food in the first six months of the new-born.

Further analysis was performed, computing the proportion of the respondents' who correctly answered each statement against those who gave incorrect answer to determine the level of outcome expectancy among the respondents. The results showed that of the 131 respondents who intended to breastfeed their children, 52.5% (n=74) had positive perception regarding the results of breastfeeding and 47.5% (n=67) had negative perceptions.

In addition, the mean and median breastfeeding outcome expectancy scores were 24.43 (SD:  $\pm 4.98$ ) and 25, while the minimum and maximum scores were eight and 30 respectively out of a maximum possible score of 30.

Forty-four percent (44%) of the respondents had breastfeeding outcome expectancy scores below the median score and 56.0% had scored above the median score.

### 4.3.3 Respondents' Breastfeeding Self-efficacy

Seven statements were used to explore and describe the respondents' breastfeeding self-efficacy. The statements dealt with the beliefs and confidence in their capabilities to take independent decision regarding breastfeeding. Each statement was evaluated with a Likert Scale ranging from totally agree (5) to totally disagree (1) with neither or nor being a mid-point (3). Items with incorrect statements were reverse-scored, and these five points were reduced into 3 points for analysis purposes. Totally agree and agree were analyses as agree, while disagree and totally disagree were analysed as disagree. Table 8 provides the frequency distribution of the descriptive analysis of the seven statements.

**Table 8: Respondents Breastfeeding Self-efficacy (N=141)**

| Statements   | Frequency & Percentage (%) |             |                 |
|--|----------------------------|-------------|-----------------|
|  | Agree                      | Disagree    | Neither/<br>Nor |
| 1. I have everything needed to start breastfeeding my child immediately after I give birth             | 111<br>78.7%               | 25<br>17.8% | 5<br>3.5%       |
| 2. It is my decision to exclusively breastfeed my child for six months after giving birth.             | 111<br>78.7%               | 24<br>17.0% | 6<br>4.3%       |
| 3. It will have no problem breastfeeding my child in the presence of family members                    | 95<br>67.4%                | 46<br>32.6% | 10<br>7.1%      |
| 4. I will have no problem breastfeeding my child in public places                                      | 91<br>64.5%                | 50<br>35.5% | 10<br>7.1%      |
| 5. It is my decision to breastfeed my child even at work   | 92<br>65.2%                | 49<br>34.8% | 11<br>7.8%      |
| 6. It is my decision to bottle-feed my child   | 86<br>61.0%                | 48<br>34.0% | 7<br>5.0%       |
| 7. It is my decision not to give milk formula to my child during the first six months of his/her life. | 111<br>78.7%               | 25<br>17.8% | 5<br>3.5%       |

As indicated in Table 7, of the 141 respondents, 111 (78.7%) believed on their capabilities to start breastfeeding their children after birth; 111 (78.7%) believed that

they are capable to take an independent decision regarding exclusive breastfeeding during the first six months; 95 (67,4%) will have no problems breastfeeding their children in the presence of their family members; 91 (64.5%) will have no problems breastfeeding in public places; 92 (65.2%) were confidence and capable of breastfeeding their children at their workplaces; 86 (61.0%) have the capabilities to decide if they want to bottle-feed their children; and 111 (78.7%) were capable of deciding when to give milk formula.

The researcher further analysed respondents' breastfeeding self-efficacy by computing the response for each of the breastfeeding self-efficacy items. The results showed that 40.4% (n=57) respondents demonstrated high breastfeeding self-efficacy (i.e. self-confident), and 59.6% (n=84) had low breastfeeding self-efficacy.

#### **4.3.4 Respondents' Breastfeeding Socio-structural Factors**

As illustrated in Figure 2, the breastfeeding socio structural factors were measured in terms of the general knowledge about breastfeeding, previous experience with breastfeeding and views regarding the sources of support for breastfeeding.

##### **4.3.4.1 Respondents' general knowledge about breastfeeding**

Nine statements were used to explore and describe the respondents' general knowledge about breastfeeding. Each statement was evaluated with a Likert Scale ranging from totally agree (5) to totally disagree (1) with neither or nor being a mid-point (3). Items with incorrect statements were reverse-scored, and these five points were reduced into 3 points for analysis purposes. Totally agree and agree were analyses as agree, while disagree and totally disagree were analysed as disagree. Table 8 provides the frequency distribution of the descriptive analysis for these twelve items.

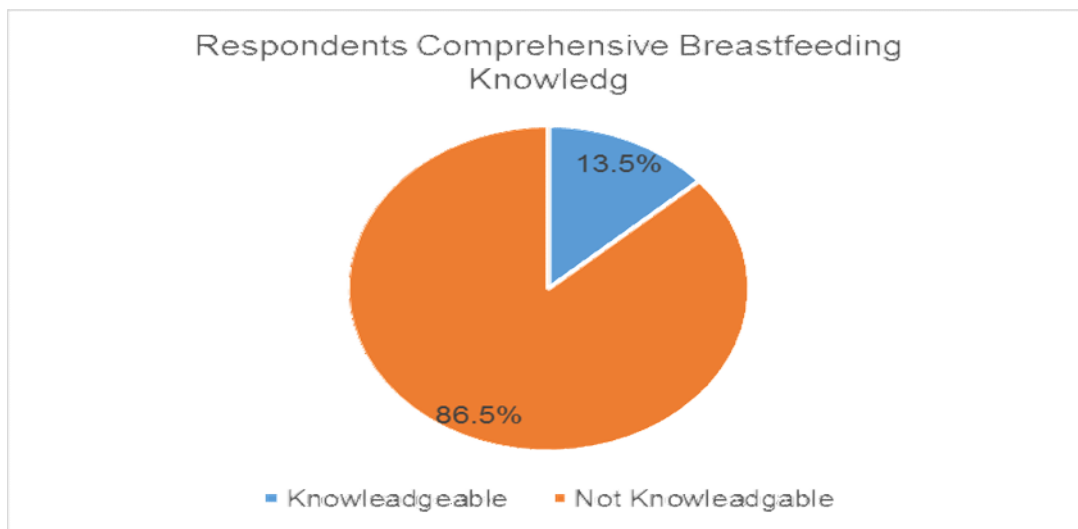
As indicated in Table 9, of the 141 respondents, 96 (68.1%) viewed breast milk as an ideal food for new-born baby, 85 (60.3%) agreed that mothers should initiate breastfeeding within an hour of giving birth, 107 (76.0%) did not know benefits of colostrum (27.0% indicated that it should expressed and discarded while 49.0% did were not show if it should express and discarded), 79 (56.0%) were knowledgeable

regarding the minimum daily frequency of breastfeeding, 86 (61.0%) knew the minimum recommended duration of breastfeeding (at least two years), 95 (67.4%) knew that breastfeeding helps with bonding with the new-born, 68 (48.2%) knew that an infant with diarrhoea should be breastfed, 53 (37.6%) were knowledgeable about the complementary food during the first six months, and 43 (31.5%) indicated that breastfeeding can negatively affect the health of the mother.

**Table 9: Respondents' knowledge about breastfeeding (N=141)**

| Statements  | Frequency & Percentage (%) |             |                 |
|---|----------------------------|-------------|-----------------|
|   | Agree                      | Disagree    | Neither/<br>Nor |
| 1. Breast milk is the best food for a new-born baby   | 96<br>68.0%                | 36<br>25.5% | 9<br>6.5%       |
| 2. A mother should start breastfeeding within one hour of delivery  | 85<br>60.3%                | 24<br>17.0% | 32<br>22.7%     |
| 3. Colostrum should be expressed and discarded  | 38<br>27.0%                | 34<br>24.0% | 69<br>49.0%     |
| 4. A mother should breastfeed her child for about 8 to 10 times in 24 hours (during day and night times)                  | 79<br>56.0%                | 33<br>23.4% | 29<br>20.6%     |
| 5. A mother should breastfeed her child for at least two years  | 86<br>61.0%                | 47<br>33.3% | 8<br>5.7%       |
| 6. Breastfeeding develops a strong bond between mother and baby   | 95<br>67.4%                | 41<br>29.1% | 5<br>3.5%       |
| 7. An infant with diarrhoea should be breastfed   | 68<br>48.2%                | 28<br>19.9% | 45<br>31.9%     |
| 8. Water or other liquids can be given in addition to breast milk to an infant during the first six months after delivery | 53<br>37.6%                | 73<br>51.8% | 15<br>10.6%     |
| 9. Breastfeeding can negatively affect the health of a mother   | 43<br>31.5%                | 95<br>67.4% | 3<br>2.1%       |

Further analysis was performed, computing the proportion of the respondents' who correctly answer each statement against those who gave incorrect answer to determine the level of knowledge about breastfeeding. The results showed that 86.5% were not knowledgeable about breastfeeding practices; and 13.5% were knowledgeable about breastfeeding. Figure 4 illustrates the respondents' level of knowledge about breastfeeding practices.



**Figure 4: Respondents' general knowledge about breastfeeding**

Finally, the researcher carried out bivariate analysis to explore the association between the respondents' general knowledge about breastfeeding and socio-demographic variables. There were no statistically significant differences observed among respondents' age, education level, and marital status with respondents' general breastfeeding knowledge.

However, there were statistically significant differences observed regarding breastfeeding knowledge between respondents who were staying together with their partners/spouses, and those who were staying without their partners/spouses ( $[x^2(1df) = 4.436 (P < 0.05)]$ ).

There were statistically significant differences in the proportion of respondents who were employed as compared to those who were not employed regarding their general breastfeeding knowledge ( $[x^2(2df) = 8.991 (P < 0.05)]$ ).

#### **4.3.4.2 Respondents' previous experience with breastfeeding**

Four measurement variables were used to assess the respondents' previous experience with breastfeeding: (1) being breastfed as a child, (2) family history of breastfeeding in the six months prior to data collection, (3) history of breastfeeding in the immediate social network in six months prior to data collection, and (4)

exposure to health education on breastfeeding during the course of this pregnancy. These measurement variables were assessed with close-ended questions. Table 10 provides a frequency distribution of the respondents' previous experience with breastfeeding.

Of the 141 respondents, 129 (91.5%) were breastfed as children, 96 (68.1%) did not have a family breastfeeding her/his child in six months prior to data collection, 72 (51.1%) had history of breastfeeding in the immediate social network in six months prior to data collection, 85 (60.3%) had had exposure to health education on breastfeeding during the course of the current pregnancy.

**Table 10: Respondents previous experience with breastfeeding (N=141)**

| Variables  | Frequency & Percentage (%) |               |            |
|--|----------------------------|---------------|------------|
|  | Yes                        | No            | Uncertain  |
| 1. Being breastfed as a child  | 129<br>91.5%               | 06<br>4.3%    | 06<br>4.3% |
| 2. Family history of breastfeeding in six months prior to data collection                          | 45<br>31.9%                | 96<br>68.1%   | 00         |
| 3. History of Breastfeeding in the immediate social network in six months prior to data collection | 72<br>51.1%                | 64<br>45.4%   | 05<br>3.5% |
| 4. Exposure to health education on breastfeeding during the course of this pregnancy               | 85<br>(60.3%)              | 56<br>(39.7%) | 00         |

#### **4.3.4.3 Respondents' view regarding the sources of support for breastfeeding**

Five statements were used to explore and describe the respondents' breastfeeding view regarding the sources of support for breastfeeding. The statements dealt with the respondents' views regarding the source of support for breastfeeding in the family, social network, and healthcare facilities. Each statement was evaluated with a Likert Scale ranging from totally agree (5) to totally disagree (1) with neither or nor being a mid-point (3). Items with incorrect statements were reverse-scored, and these five points were reduced into 3 points for analysis purposes. Totally agree and agree were analyses as agree, while disagree and totally disagree were



analysed as disagree. Table 11 provides the frequency distribution of the descriptive analysis of the five statements.

The results in Table 11, indicated that of the 141 respondents, 78 (55.3%) received adequate health education on breastfeeding from healthcare providers during the last five months of their pregnancy, 95 (67.4%) viewed their family members as supportive of breastfeeding, 94 (66.7%) viewed their partners/spouses as very supportive of breastfeeding, 88 (62.4%) viewed their close relatives (spouse, siblings, and parents) and friends as very supportive of breastfeeding, and 76 (53.9%) viewed their work environment as non-conducive to breastfeeding.

**Table 11: Description of the respondents' socio-structural factors**

| Statements   | Frequency & Percentage (%) |             |
|--|----------------------------|-------------|
|  | Agree                      | Disagree    |
| <b>1. Healthcare providers have given me adequate information about breastfeeding during the last five months.</b> | 78<br>55.3%                | 63<br>44.7% |
| <b>2. My family is very supportive of breastfeeding</b>  | 95<br>67.4%                | 46<br>32.6% |
| <b>3. My spouse's/partner's is very supportive of breastfeeding</b>  | 94<br>66.7%                | 47<br>33.3% |
| <b>4. My close relatives' and friends are very supportive of breastfeeding.</b>                                    | 88<br>62.4%                | 53<br>37.6% |
| <b>5. My work environment is conducive to breastfeeding</b>  | 65<br>46.1%                | 76<br>53.9% |

The researcher further analysed respondents' socio-structural attributes by computing the response for each of the breastfeeding socio-structural factors. The results showed that 93.6% (n=132) of the respondents did not have supportive breastfeeding socio structural environment, and 6.4% (n=9) had a supportive breastfeeding socio-structural environment.

#### 4.4 RESPONDENTS OVERALL PRENATAL SOCIAL COGNITIVE BREASTFEEDING BEHAVIOUR

In order to determine the overall prenatal social cognitive breastfeeding behaviour, the researcher introduced the concept positive prenatal social cognitive breastfeeding behaviour. This concept was operationalised by ascribing the scores of one to five to each measurement items of the four independent variables.

The score of five points was given to the most correct answer and the score of one point was given to the most incorrect answer. These scores were computed and the researcher used median score for the construct to conclude on respondent's breastfeeding prenatal behaviour. The variable with the score below the median score was coded as negative prenatal breastfeeding behaviour and above the median score as positive prenatal breastfeeding behaviour.

Therefore, positive prenatal social cognitive breastfeeding behaviour referred to (1) positive intention toward breastfeeding which included high general knowledge about breastfeeding and positive experience with breastfeeding; (2) positive breastfeeding outcome expectancy which included the plan to exclusively breastfeed and positive perception about the results of breastfeeding; (3) high social cognitive self-efficacy, and (4) supportive social cognitive socio-structural factors (see Table 12).

**Table 12: Respondents' Overall Prenatal Social Cognitive Breastfeeding Behaviour**

| Prenatal Social cognitive breastfeeding behaviour |              | Frequency | Percentage (%) | Total           |
|---|--------------|-----------|----------------|-----------------|
| 1. Breastfeeding intentions                       | Positive     | 122       | 86.5%          | 141<br>(100.0%) |
|   | Negative     | 19        | 13.5%          |                 |
| 2. Breastfeeding outcome expectancy               | Positive     | 74        | 52.5%          | 141<br>(100.0%) |
|   | Negative     | 67        | 47.5%          |                 |
| 3. Breastfeeding self-efficacy                    | High         | 47        | 33.3%          | 141<br>(100.0%) |
|   | Low          | 94        | 66.7%          |                 |
| 4. Breastfeeding socio-structural factors         | Supportive   | 9         | 6.4%           | 141<br>(100.0%) |
|   | Unsupportive | 132       | 93.6%          |                 |

As indicated in Table 12, 122 (86.5%) of the 141 respondents had positive prenatal breastfeeding intentions behaviour, 74 (52.5%) of the 141 respondents had positive prenatal breastfeeding outcome expectancy behaviour, 47 (33.3%) of the 141 respondents had high prenatal breastfeeding self-efficacy behaviour, and 9 (6.4%) of the 141 respondents had supportive prenatal breastfeeding socio-structural factors. It means that all these respondents have scored above the median score for the items measurements for each independent variable.

#### 4.5 ACTUAL BREASTFEEDING PRACTICES

This section refers to the second sub-objective of the study. It focused on breastfeeding methods and the rationale for certain breastfeeding methods within the first hour of child birth and six months thereafter. Data were collected within the first 72 hours post-delivery and at the seven months post-delivery.

##### 4.5.1 Breastfeeding Methods

Infant feeding methods are classified according to the World Health Organisation (WHO 2007) indicators for assessing infant and young child feeding as (1) exclusive breastfeeding, (2) predominant breastfeeding, (3) complementary feeding, (4) breastfeeding, and (5) bottle feeding. The respondents were asked about the feeding practices they used for their children immediately and six months after delivery. They were also requested to provide reasons for their chosen feeding practices. Table 13 presents the respondents' breastfeeding practices.

**Table 13: Respondents' actual breastfeeding practice (N=140)**

|  | Within the first<br>hour of delivery | At Six months<br>after delivery |
|--|--------------------------------------|---------------------------------|
|  | Frequency & %                        | Frequency & %                   |
| <b>1. Exclusive breastfeeding</b> ( <i>Breast milk or with drops or syrups of vitamins, mineral supplements or medicines</i> ) | 78<br>87.6%                          | 48<br>34.3%                     |
| <b>2. Predominant breastfeeding</b> ( <i>Infant food or formula, water or any other liquid in addition to breast milk</i> )    | 11<br>12.4%                          | 92<br>65.7%                     |
| <b>3. Did not feed the baby</b>  | 10 (7.0%)                            | 00                              |

As shown in Table 13, exclusive breastfeeding was practiced by 78 (87.6%) of the respondents within the first hour of delivery and 48 (34.3%) of the respondents at six months post-delivery. With regard to predominant breastfeeding, it was shown that it increased from 11 (12.4%) within the first hour of delivery to 92 (65.7%) at six months post-delivery. Only 10 (7.0%) of the respondents did not feed their new-born within the first hour of delivery.

The 10 (7.0%) respondents who did not feed their children within the first hour post-delivery believed that a new-born should not be fed in the first hours of their lives. However, they did initiate breastfeeding between the first 48 and 72 hours.

#### 4.5.2 Reasons for predominant breastfeeding

Table 14 provides a summary of the reasons the respondents attributed to predominant feeding practices. Five reasons were given in total. Two of these reasons (inadequacy of breast milk supply and health care providers' instructions) were attributed the most for the predominant feeding practices within the first hour of delivery and at six months post-delivery and three (breast milk no longer enough for the nutritional need of the child, breastfeeding being viewed as painful and time consuming, and resumption of work) were only attributed to complementary feeding practice at six months post-delivery.

**Table 14: Reasons for predominant breastfeeding**

|   | Within the first | At Six months    |
|---|------------------|------------------|
|   | hour of delivery | after delivery   |
|   | Frequency & %    | Frequency & %    |
| <b>1. Inadequacy of breast milk supply</b>                                    | 28<br>88.0%      | 24<br>26.1%      |
| <b>2. Doctor' instructions</b>  | 13<br>32.0%      | 8<br>8.7%        |
| <b>3. Mother's felt that the baby is not satisfied with breast milk alone</b> | -                | 17<br>18.5%      |
| <b>4. Mothers' felt that breastfeeding is painful and time consuming</b>      | -                | 16<br>17.4%      |
| <b>5. Mothers resumed work</b>  | -                | 27<br>29.3%      |
| <b>Total</b>  | <b>41 (100%)</b> | <b>92 (100%)</b> |

## 4.6 SOCIAL COGNITIVE PREDICTORS OF EXCLUSIVE BREASTFEEDING

Bivariate Spearman rank order ( $\rho$ ) correlational and multiple logistic regression analyses were performed to determine the social cognitive predictors of exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia. Bivariate correlation analysis was performed to identify the correlation between positive prenatal social cognitive breastfeeding behaviour and exclusive breastfeeding within the first hour of birth and at six months post-delivery. Multiple logistic regression analysis was used to determine the predictive values of those variables that showed positive correlation with exclusive breastfeeding.

The results of the independent variables for overall prenatal social cognitive breastfeeding behaviour and the dependent variable, exclusive breastfeeding were used for correlational and multivariate logistic regression analysis. The dependent variable exclusive breastfeeding was analysed as a dichotomous variable referring to (1) exclusive breastfeeding within the first hour post- delivery, and (2) exclusive breastfeeding up to six months post-delivery.

### 4.6.1 Results of Bivariate Correlational Analysis

Table 15 presents a summary of the results of bivariate Spearman correlational analysis for exclusive breastfeeding.

**Table 15: Results of bivariate correlational analysis for EBF**

| Social cognitive breastfeeding behaviour               | EBF within the first hour of birth |         | EBF Up to six months post-delivery |         |
|--|------------------------------------|---------|------------------------------------|---------|
|  | Rho                                | P-Value | rho                                | P-Value |
| 1. Positive intentions toward breastfeeding            | 0.249*                             | 0.019   | 0.368**                            | 0.000   |
| 2. Positive breastfeeding outcome expectancy           | 0.081                              | 0.450   | 0.381**                            | 0.000   |
| 3. High breastfeeding self-efficacy                    | 0.255*                             | 0.016   | 0.504**                            | 0.000   |
| 4. Supportive breastfeeding socio-cultural environment | 0.101                              | 0.234   | 0.240**                            | 0.004   |

\* Correlation is significant at the 0.05 level (2-tailed).

\*\* Correlation is significant at the 0.01 level (2-tailed).

$\rho$ : Spearman Correlation Coefficient

As indicated in Table 15, there was a medium, positive and statistically significant correlation between respondents' breastfeeding intention and exclusive breastfeeding practices within one hour ( $\rho=0.249$ ,  $p\text{-value}=0.019$ ), as well as between respondents' breastfeeding intention and exclusive breastfeeding practices within six months after delivery ( $\rho=0.368$ ,  $p\text{-value} <0.01$ ). This means that primiparous mothers who intended to breastfeed are more likely to exclusively breastfeed their children within the first hour of birth, and continue exclusive breastfeeding for six months than those who did not intend to breastfeeding.

Meanwhile, there was a small and positive correlation between respondents' breastfeeding outcome expectancy and exclusive breastfeeding practices within one hour, but the correlation was not statistically significant ( $\rho=0.081$ ,  $p\text{-value}=0.45$ ). However, there was a medium, positive and statistically significant correlation between respondents' breastfeeding outcome expectancy and exclusive breastfeeding practices within six months ( $\rho=0.381$ ,  $p\text{-value} <0.01$ ). This indicate that primiparous mothers with positive breastfeeding outcome expectancy are more likely to exclusively breastfeed their children up to six months than those with negative breastfeeding outcome expectancy.

There was a small, positive and statistically significant correlation between respondents' breastfeeding self-efficacy and exclusive breastfeeding practices within one hour ( $\rho=0.255$ ,  $p\text{-value}=0.016$ ), as well as a large, positive and statistically significant correlation between respondents' breastfeeding self-efficacy and exclusive breastfeeding practices within six months ( $\rho=0.504$ ,  $p\text{-value} <0.01$ ). This means that primiparous mothers with high breastfeeding self-efficacy are more likely to exclusively breastfeed their children within the first hour of birth, and to continue with exclusive breastfeeding for six months than those with low breastfeeding self-efficacy.

Meanwhile, there was a small and positive correlation between respondents' breastfeeding socio structural factors and exclusive breastfeeding practices within one hour, but the correlation was not statistically significant ( $\rho=0.101$ ,  $p\text{-value}=0.234$ ). However, there was a small, positive and statistically significant correlation between respondents' breastfeeding socio structural factors and

exclusive breastfeeding practices within six months ( $\rho=0.240$ ,  $p$ -value  $<0.01$ ). This means that primiparous mothers with supportive socio-structural factors toward breastfeeding are more likely to exclusively breastfeed their children for six months than those with unsupportive socio-structural environment toward breastfeeding.

Further bivariate correlational analyses using various combinations were carried out to explore the predictive strengths of the social cognitive predictors of exclusive breastfeeding practices within the first hour of delivery and six months thereafter. Only two combinations were statistically significant, and the results are summarised in Table 16. As indicated in table 16, the combination of the four social cognitive predictors (positive intentions toward breastfeeding, positive breastfeeding outcome expectance, and high breastfeeding self-efficacy) showed positive, statistically significant, and stronger correlation ( $\rho=0.237$ ,  $P$ -value= $0.005$ ) with exclusive breastfeeding up to six months post-delivery. Which means that a primiparous woman with those four attributes is more likely to exclusively breastfeed his/her child within the first hour post-delivery than the primiparous woman with one of any of these attributes.

**Table 16: Bivariate correlational analysis of combined social cognitive predictors of EBF**

|  | EBF within the first hour post-delivery |         | EBF up to six months post-delivery |         |
|--|---|---------|------------------------------------|---------|
|  | $\rho$                                  | P-Value | $\rho$                             | P-Value |
| 1. Positive intentions toward breastfeeding,         | -                                       | -       | 0.237**                            | 0.005   |
| 2. Positive breastfeeding outcome expectancy         |   |         |                                    |         |
| 3. High breastfeeding self-efficacy                  |   |         |                                    |         |
| 4. Supportive breastfeeding socio-structural factors |   |         |                                    |         |
| 1. Positive breastfeeding outcome expectancy         | 0.25**                                  | 0.003   | 0.558**                            | 0.000   |
| 2. High breastfeeding self-efficacy                  |   |         |                                    |         |

**\*\* Correlation is significant at the 0.01 level (2-tailed).**

The combination of high breastfeeding self-efficacy and positive breastfeeding outcome expectance had the strongest correlation strength with exclusive breastfeeding within the first hour post-delivery ( $\rho=0.25$ ,  $P\text{-value}=0.003$ ) and six months thereafter ( $\rho=0.558$ ,  $P\text{-value} 0.000$ ) than any other combination. This led the researcher to conclude that the above combination is the best predictor of exclusive breastfeeding in the first six months among the primiparous mothers in Addis Ababa, Ethiopia.

#### 4.6.2 Results of Multiple Logistic Regression Analysis

The researcher submitted the four independent measurement variables that showed positive, statistically significant correlation with exclusive breastfeeding to a multiple logistic regression model to determine their predicting strengths on exclusive breastfeeding. The results are presented in Table 17 for exclusive breastfeeding within the first hour post-delivery and in Table 18 for exclusive breastfeeding up to six months post-delivery.

**Table 17: Results of Multiple Logistic Regression Analysis of EBF within the first hour post-delivery**

|   | B value | S.E. | Wald  | Df | P-value | Adjusted Odds Ratio | 95% C.I. for Odds Ratio |       |
|---|---------|------|-------|----|---------|---------------------|-------------------------|-------|
|   |         |      |       |    |         |                     | Lower                   | Upper |
| <b>1. Positive intention toward breastfeeding</b> | .60     | .52  | 1.31  | 1  | .25     | 1.825               | .65                     | 5.09  |
| <b>2. High breastfeeding self-efficacy</b>        | .571    | .430 | 1.759 | 1  | .185    | 1.770               | .761                    | 4.113 |
| <b>3. Positive breastfeeding self-efficacy</b>    | .280    | .539 | .269  | 1  | .604    | 1.323               | .460                    | 3.807 |
| <b>Constant</b>                                   | .126    | .356 | .124  | 1  | .724    | 1.134               |                         |       |

Df: Degree of freedom

As indicated in Table 16, the model was able to distinguish between the primiparous mothers who reported and did not report exclusive breastfeeding within the first hour. The model was statistically significant with Chi-square value ( $\chi^2$ ) of 7.96, and



P-value of 0.047 for three measurements variables: positive intentions toward breastfeeding, positive breastfeeding outcome expectancy, and high breastfeeding self-efficacy. However, none of the three variables made a statistically significant contribution to individually predict exclusive breastfeeding within the first hour post-delivery when controlled by other variables. This means that these variables cannot independently predict exclusive breastfeeding within the first hour post-delivery.

The results in Table 18 suggest that the model was able to distinguish between the primiparous mothers who reported and did not report exclusive breastfeeding up to six months post-delivery. The model was statistically significant with Chi-square value ( $\chi^2$ ) of 68.31, and P-value of <0.001 for four measurement variables: positive intentions to breastfeeding, positive outcome expectancy, high self-efficacy, and supportive socio-structural factors.

**Table 18: Results of Multiple Logistic Regression Analysis for EBF up to 6 months post-delivery**

|   | B value | S.E. | Wald   | Df | P-value | Adjusted Odds Ratio | 95% C.I. for Odds Ratio |        |
|---|---------|------|--------|----|---------|---------------------|-------------------------|--------|
|   |         |      |        |    |         |                     | Lower                   | Upper  |
| <b>1. Positive intention toward breastfeeding</b>           | 0.960   | .746 | 1.659  | 1  | .198    | 2.612               | .606                    | 11.265 |
| <b>2. High breastfeeding self-efficacy</b>                  | 1.990   | .496 | 16.089 | 1  | .000    | 7.319               | 2.767                   | 19.357 |
| <b>3. Positive breastfeeding outcome expectancy</b>         | 1.420   | .505 | 7.907  | 1  | .005    | 4.136               | 1.537                   | 11.127 |
| <b>4. Supportive breastfeeding socio-structural factors</b> | 1.562   | .990 | 2.491  | 1  | .115    | 4.770               | .685                    | 33.201 |
| <b>Constant</b>   | 4.924   | .971 | 25.731 | 1  | .000    | .007                |                         |        |

Df: Degree of freedom

However, high breastfeeding self-efficacy and positive breastfeeding outcome expectancy were the two socio cognitive predictors of EBF among primiparous mothers in Addis Ababa, Ethiopia. These two variables showed statistically significant contributions to the model when individually controlled by other variables.

This means that they can independently predict exclusive breastfeeding up to six months post-delivery.

High breastfeeding self-efficacy was the strongest predictor of EBF with an adjusted odds ratio of 7.32 (95% C.I.: 2.77, 19.36). This indicates that primiparous mothers with high breastfeeding self-efficacy were at least seven times more likely to exclusively breastfeed their children up to six months than those with low breastfeeding self-efficacy, controlling for all other factors in the model.

Positive outcome expectancy was the second strongest predictor of EBF with an adjusted odds ratio of 4.14 (95% C.I.: 1.54, 11.13) indicating that mothers with high breastfeeding outcome expectancies are at least four times more likely to exclusively breastfeed their children compared with mothers having negative breastfeeding outcome expectancy when controlled with other factors in the model.

#### **4.7 SUMMARY OF THE RESULTS**

The researcher used quantitative longitudinal, descriptive, exploratory and correlational designs to determine the social cognitive predictors of exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia within the first six months post-delivery. The researcher used the four constructs of Bandura's social cognitive theory to explore and describe the respondents' prenatal social cognitive behaviour as illustrated in Figure 2.

Data were collected over a period of ten months from 141 primiparous mothers at three different points in time. The first stage of data collection focused on prenatal social cognitive breastfeeding behaviours and it occurred at the last antenatal visits. The second and third stages of data collection focused on actual breastfeeding behaviour within the first hour of post-delivery and six months thereafter. These data were collected using structured questionnaires which were developed based on the social cognitive theory and the WHO guidelines on breastfeeding.

Descriptive summary statistics were used to analyse the prenatal breastfeeding behaviour of primiparous mothers. Bivariate correlational and multiple logistic regression analyses were used to identify the social cognitive determinants and

predictors of exclusive breastfeeding within the first hour post-delivery and six months thereafter. Table 19 provides a summary of the main results for the first phase of the study.

**Table 19: Summary of the results of the first phase**

| <b>Social Cognitive Constructs</b>  | <b>Measurement Variables</b>  | <b>Variables with positive, statistically significant correlation with EBF</b> | <b>Predictive value for EBF</b>   |
|---|---|--|---|
| <b>Intentions or goals</b>  | 1. Planned Breastfeeding Methods  | Positive intention toward breastfeeding  | Low predictive value  |
| <b>Outcome expectancy</b>   | 1. Perceived values associated with the results of breastfeeding  | Positive breastfeeding outcome expectancy                                      | High individual predictive value for EBF at the first hour-up to six months post-delivery |
| <b>Self-efficacy</b>  | 1. Beliefs and confidence in the capabilities to take independent decision regarding breastfeeding  | High breastfeeding self-efficacy   | High individual predictive value for EBF at the first hour-up to six months post-delivery |
| <b>Socio-structural factors</b>   | 1. General knowledge about breastfeeding<br>2. Previous experience with breastfeeding<br>3. Views regarding the source of support for breastfeeding in the family, social network & healthcare facilities | Supportive breastfeeding socio-structural factors                              | Low predictive value  |
| <b>Combined effects of:</b><br>Positive intentions toward breastfeeding<br>Positive breastfeeding outcome expectancy<br>High breastfeeding self-efficacy<br>Supportive breastfeeding socio-structural factors |   |  | Low predictive value (cannot predict within the first post-delivery)                      |
| <b>Combined effects of</b><br>High breastfeeding self-efficacy<br>Positive breastfeeding outcome expectancy   |   |  | High predictive value (In the first hour and up to six months post-delivery)              |

## **4.8 DISCUSSION OF THE MAIN RESULTS**

### **4.8.1 Exclusive Breastfeeding Practices**

The results of this study suggest that exclusive breastfeeding up to six months post-delivery among primiparous mothers is a great challenge for healthcare professionals. As indicated in the results, the proportion of primiparous mothers who exclusively breastfed their children declined from 87.6% within the first hour post-delivery to 34.3% at six months post-delivery. These proportions are below the target set by the WHO to increase the rate of EBF in the first six months to at least 50% by 2025 (WHO & UNICEF 2015).

These results are similar to the results of exclusive breastfeeding among Ethiopian women in general. Reports indicated that majority of Ethiopian women support breastfeeding, but no more than 50.0% of them actually initiate breastfeeding within the hour and exclusively breastfeed up to six months (CSA and ICF, 2012).

The reasons given by the respondents for not exclusively breastfeeding their children from the first hour of birth up to six months post-delivery are similar to those documented in the literature. Women perceptions about the adequacy of breast milk supply, medical reasons, and working conditions are known to negatively affect exclusive breastfeeding practices among women (Shwetal et al 2012; WHO & UNICEF 2015). Resumption of work was the reason given by the large proportion (29.3% of 92) of women who did not continue with exclusive breastfeeding up to six months. Even though, the number of respondents were few, this reason could be linked with the duration of maternity leave as discussed above. Coupled with findings from other studies advocating for longer durations of maternity leave with pay could be one area of considerations for promoting exclusive breastfeeding, particularly among primiparous mothers who are employed. Negative perceptions associated with breastfeeding such as breastfeeding is painful and time consuming, beliefs that the baby is not satisfied with breast milk are culturally bound. Authors (Ishak, Adzan, Quan, Shafie, Rani, & Ramli 2014) indicated that exclusive breastfeeding practices are negatively influenced by some practices and cultural beliefs and practices.

#### 4.8.2 Prenatal Social cognitive attributes and Actual EBF Practices

The results of the first phase of this study as presented in previous sections of this chapter confirm that exclusive breastfeeding up to six months among primiparous mothers is associated with the women' prenatal social cognitive breastfeeding attributes. Some of those attributes can confidently predict their breastfeeding behaviour (predictors) and others lack predictive strength but can positively influence exclusive breastfeeding (enablers) among primiparous mothers.

Positive prenatal breastfeeding outcome expectancy and high prenatal breastfeeding self-efficacy have shown higher predictive value for exclusive breastfeeding both as individual attribute and as combined attributes than the rest of the prenatal social cognitive breastfeeding attributes and combinations. The predictive value of high prenatal breastfeeding self-efficacy and positive breastfeeding outcome expectancy is documented in the literature. Glassman, McKearney, Saslaw, and Sirota (2014:303-305) found higher breastfeeding self-efficacy to be the best modifiable factor associated with exclusive breastfeeding practices. They argued that efforts to improve breastfeeding self-efficacy will serve to support the promotion of breastfeeding. Similarly, Wu, Hu, McCoy and Efirid (2014) identified positive prenatal breastfeeding outcome expectancy as a strong predictor of exclusive breastfeeding among women and recommended that intervention aimed at increasing exclusive breastfeeding should strengthen women breastfeeding outcome expectancy attribute.

It is clear that social cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Ethiopian should primarily focus on identifying the risk factors for high breastfeeding self-efficacy and positive breastfeeding outcome expectancy. Such interventions should target the two attributes in order to achieve positive results.

Although, positive intentions toward breastfeeding and supportive breastfeeding socio-structural factors have not shown high predictive value to exclusive breastfeeding, their positive association with exclusive breastfeeding should be considered when developing strategies to promote breastfeeding.

The association between these social cognitive constructs and exclusive breastfeeding is supported in the literature. Evidence showed that mothers with positive intentions towards breastfeeding are more likely to promote and exercise exclusive breastfeeding than those with negative intentions toward breastfeeding (Berra 2013; Kaikini & Hyrkas, 2014; Persad & Mensinger 2007). In the Democratic Republic of Congo, negative intentions towards breastfeeding were associated with breastfeeding discontinuation among mothers (Babakazo et al 2015).

Supportive breastfeeding socio-structural factors have been associated with breastfeeding among mothers in previous studies. Authors (Kanhadilok & McGrath 2015) reported that the decision to initiate breastfeeding and to exclusively breastfeed among adolescent mothers were influenced by healthcare professional, family members' and immediate social network support towards breastfeeding during pregnancy. Others (Noble-Carr & Bell 2012) described positive association between exclusive breastfeeding among women and the support given by their partners, mothers and peers reading breastfeeding.

The results suggest that primiparous mothers' socio-structural factors and intentions were not supportive enough to create enabling environment for the exclusive breastfeeding practices. Thus strategies to promotion exclusive breastfeeding among these groups of women should address these social cognitive constructs as well. Considering and addressing the influence significant others have on primiparous mothers is in line with the social cognitive theory.

#### **4.9 CONCLUSION**

The researcher intended to use the results of the first phase of this study as baseline to develop social cognitive strategies to promote exclusive breastfeeding among primiparous mothers. The results as presented and discussed in this chapter highlight the importance of building such strategies on existing global and national strategies for infant and young child feeding and the resolutions of the World Health Organisation on health promotion.

## CHAPTER FIVE

### PRESENTATION AND DESCRIPTION OF THE STRATEGIES

#### 5.1 INTRODUCTION

The fifth chapter deals with the presentation and description of the second phase of the study. The second phase focused on addressing the last objective of the study which was to develop social cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia. This chapter describes the panel of experts with the response rates, and the results of the three rounds Delphi before describing the strategies in details.

#### 5.2 DESCRIPTION OF THE PANEL OF EXPERTS

As described in Chapter three, the panel of experts was made of thirty-two local experts and five international experts. They are described in this section according to their expertise; institutional affiliation and the response rate in the three rounds of Delphi (see Table 20). It is important to note that the local experts participated only in rounds one and two, while international experts were used for round 3.

**Table 20: Distribution of the panel of experts and Delphi response rate**

| Institutional Affiliation                               | Frequency | Response rate per round |           |          |
|---|-----------|-------------------------|-----------|----------|
|   |           | Round 1                 | Round 2   | Round 3  |
| <b>Local experts</b>                                    | 32        |                         |           |          |
| <b>1. Federal Ministry of Health</b>                    | 5         | 5                       | 5         | -        |
| <b>2. Addis Ababa City Administration Health Bureau</b> | 5         | 5                       | 5         | -        |
| <b>3. General Public Hospitals</b>                      | 6         | 6                       | 6         | -        |
| <b>4. Ethiopian Public Health Institute</b>             | 5         | 5                       | 5         | -        |
| <b>5. Civil Society Group</b>                           | 3         | 3                       | 3         | -        |
| <b>6. Ethiopian Universities</b>                        | 8         | 8                       | 8         | -        |
| <b>International experts</b>                            | 5         |                         |           |          |
| <b>7. South African Universities</b>                    | 2         | -                       | -         | 2        |
| <b>8. World Health Organisation</b>                     | 3         | -                       | -         | 3        |
| <b>Total</b>  | <b>37</b> | <b>32</b>               | <b>32</b> | <b>5</b> |

### **5.3 RESULTS OF THE STRATEGIES DEVELOPMENT PROCESS**

As stated in Chapter Three, the researcher used the results of the first phase of the study as baseline to develop the initial strategies which were submitted to the three rounds of Delphi. Six evaluation criteria with four points Likert Scales were used during the development of the strategies. For easy of analysis, the researcher used a scoring system. Strongly agree responses were given a score of four, agree responses were given a score of three, disagree response were given a score two and strongly disagree responses were given a score of one.

The maximum score for each evaluation criteria was 10. This score was multiple by the total number of the participants to obtain the expected maximum score. The level of consensus was calculated using the expected maximum score as a denominator and multiplying the score obtained by 100 to obtain the percentage. Table 20 provides the results of the level of consensus of the strategies according to the evaluation criteria.

As indicated in Table 21, the overall level of consensus varies from 75.0% to 93.0% for the three rounds and from 70.0% to 97.0% for the six evaluation criteria. It showed that the level of consensus was very high among the experts regarding the different aspects of the strategies.



**Table 21: Results of the three rounds Delphi**

| <b>Evaluation criteria</b>  | <b>Number of respondent</b> | <b>Total score</b> | <b>Score Obtained</b> | <b>Level of consensus (%)</b> |
|---|-----------------------------|--------------------|-----------------------|-------------------------------|
| <b>1. Specificity:</b> The strategies as described focused on the promotion of exclusive breastfeeding  | 32                          | 320                | 256                   | 80.0%                         |
| <b>2. Relevance:</b> The strategies as described are appropriate for the promotion of exclusive breastfeeding in the Ethiopian context.                             | 32                          | 320                | 288                   | 90.0%                         |
| <b>Total first Round Delphi</b>   |                             | <b>640</b>         | <b>544</b>            | <b>85.0%</b>                  |
| <b>3. Applicability:</b> The strategies as described can be used within the existing health programmes and used to promote exclusive breastfeeding among all women. | 32                          | 320                | 310                   | 97.0%                         |
| <b>4. Acceptability:</b> The strategies as described will be accepted by the primary health care providers and promoters  | 32                          | 320                | 288                   | 90.0%                         |
| <b>Total Second Round Delphi</b>  |                             | <b>640</b>         | <b>598</b>            | <b>93.4%</b>                  |
| <b>5. Effectiveness:</b> The strategies as described have the potential to increase the rate of exclusive breastfeeding.  | 5                           | 50                 | 35                    | 70.0%                         |
| <b>6. Comparability:</b> The strategies as described are comparable to international standards.   | 5                           | 50                 | 40                    | 80.0%                         |
| <b>Total third Round Delphi</b>   |                             | <b>100</b>         | <b>75</b>             | <b>75.0%</b>                  |

## **5.4 DESCRIPTION OF THE STRATEGIES**

From the organisational perspective, a strategy is a well-defined roadmap aimed at maximising the organisation's strengths and minimising the risks. It involves the integration of organisational activities, allocation and utilisation of resources within the organizational environment to meet the set objectives (MSG, 2013).

Within the above understanding, the researcher viewed social cognitive strategy to promote exclusive breastfeeding as a plan of social cognitive actions through which health promoters, health care providers and health programme managers should use to maximise exclusive breastfeeding among the primiparous mothers in Ethiopia.

This plan as described in this section consists of six main components: (1) scientific evidence for the strategies, (2) the rationale for the strategies, (3) the aim of the strategies, (4) the scope of the strategies, (5) the guiding principles, and (6) the key strategic areas.

### **5.4.1 Scientific Evidence for the Strategies**

The current strategies are based on the evidence that derived from the application of Bandura (2000) social cognitive theory. As stated in the first chapter of this study, Social cognitive theory is based on the operation of established principles of learning within the human social context and explains how people regulate their behaviour via reinforcement and control to achieve goal-directed behaviour that can be maintained over time (Luszczynka and Schwarzer 2005).

Bandura (2000) argued that a person' behaviour is determined by the interaction of his/her plans to act or intentions to perform a behaviour (goals or intentions), the value he/he attaches to the anticipated results of the behaviour (outcome expectancy), the beliefs in his/her capabilities to successfully perform the behaviour (self-efficacy), and factors that facilitate or inhibit his/her execution of the behaviour (socio-structural factors).

The researcher believed that as a health and human behaviour, primiparous mothers exclusive breastfeeding practices are determined by the interactions of these four social cognitive constructs. Establishing the strengths of these interactions was deemed important in developing strategies aimed at promoting exclusive breastfeeding among the primiparous mothers in Ethiopia.

From the evidence of this study, the researcher decided to focus the current strategies on breastfeeding outcome expectance and self-efficacy, which have shown high predictive value, individually and collectively for exclusive breastfeeding among primiparous mothers from the first hour post-delivery up to six months.

#### **5.4.2 Rationale for the strategies**

As discussed in Chapter Four, breastfeeding self-efficacy and breastfeeding outcome expectancy were statistically significant predictors of EBF among primiparous mothers in Addis Ababa, Ethiopia. The strength of correlation with EBF was even stronger and significant when combined.

The researcher believed that social cognitive strategies based on breastfeeding self-efficacy and outcome expectancies would achieve better results regarding the promotion of exclusive breastfeeding practices among primiparous mothers than the intentions and socio-structural factors. Increased exclusive breastfeeding during the first six months may lead to improvement in child survival, decreased morbidity and mortality associated with suboptimal breastfeeding among under-five year's children.

#### **5.4.3 Aim of the Strategies**

The overall aim of these social cognitive strategies is to promote exclusive breastfeeding among primiparous mothers in Ethiopia in support of the national strategy on infant and child feeding through the empowerment of primiparous mothers, and the support of frontline healthcare providers, and health programme managers.

#### 5.4.4 Scope of the Strategies

The proposed strategies are comparable to the national and international standards of similar exclusive breastfeeding strategies. Although these strategies were primarily designed for primiparous mothers, they are also applicable to other women within the existing programmes.

#### 5.4.5 Guiding Principles

The social cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia were guided by five main principles (self-evaluation, goal-oriented self-efficacy, empowerment, enabling, and mediation) derived from the social cognitive theory (Bandura 2005) and the global strategy on health promotion (WHA51.12).

#### 5.4.5 Key Results Areas (KRA)

Two key results areas and five strategic objectives were formulated and validated. Table 22 provides a list of the key results areas with the corresponding strategic objectives and guiding principles. Each KRA is composed of a general description, strategic objectives with rationales, strategic actions, expected outcome, and measurable indicators.

**Table 22: KRA with the corresponding strategic objectives and principles**

| <b>Key Results Areas (KRA)</b>                   | <b>Strategic objectives</b>   | <b>Guiding principles</b>   |
|--|---|-----------------------------|
| <b>1. Build individual capacity for EBF</b>      | 1. To assist primiparous mothers to develop positive exclusive breastfeeding outcome expectancy capabilities                | Self-evaluation             |
|  | 2. To assist primiparous mothers to increase their exclusive breastfeeding capabilities                                     | Goal-oriented self-efficacy |
|  | 3. To assist primiparous mothers to enhance their capabilities to take control over their exclusive breastfeeding practices | Empowerment                 |
| <b>2. Create an enabling environment for EBF</b> | 4. To establish supportive social networks for exclusive breastfeeding  | Enabling                    |
|  | 5. To facilitate a conducive environment for exclusive breastfeeding  | Mediation                   |

#### **5.4. 1 KRA 1: Build individual capacity for exclusive breastfeeding**

The overall goal of this KRA is to enhance the individual social cognitive attributes associated with high predictive exclusive breastfeeding practice among primiparous mothers. As indicated in Chapter Four, outcome expectancy and self-efficacy showed high correlation with exclusive breastfeeding, even when controlled with other independent variables. Therefore, this KRA is based on the individual predictive value of breastfeeding outcome expectance and self-efficacy. It is guided by the principles of self-evaluation, goal-oriented self-efficacy, and empowerment as illustrated in Table 21.

##### **Strategic Objective1:**

- *To assist primiparous mothers to develop positive exclusive breastfeeding outcome expectancy capabilities*

##### ***Rationale:***

Breastfeeding outcome expectancy was measured by looking at the women' perceived values attached to the benefits or results for exclusive breastfeeding. The results of this study showed that the lack of clear exclusive breastfeeding plan and negative perceptions about the outcomes of exclusive breastfeeding have negative influence on exclusive breastfeeding practice within the first six months.

Therefore, any activity aimed at promoting exclusive breastfeeding among primiparous mothers must minimise factors that negatively influence their perceptions and views towards breastfeeding outcomes and maximise positive perceptions and views towards the outcomes of exclusive breastfeeding for the infant and the mother.

In addition, this strategic objective is related to the principle of self-evaluation. This principle emphasises the importance of setting specific goal regarding behaviour. It requires primiparous mothers to set specific goals regarding their breastfeeding practices as early as possible and use these goals to evaluate their own performance.

It is argued that setting specific goal determines the amount of effort one requires to achieve success and boost self-efficacy. Social cognitive theorists agree that people gain satisfaction when they achieve goals that they value and this achievement increases the likelihood of repeating the behaviour (Bandura 2005).

**Strategic actions:**

- Reinforcement of the importance and benefits of breastfeeding from the first ANC visits
- Integrate Social Cognitive Skills Training with focus on exclusive breastfeeding into the first antenatal care health education:
  - ✓ Goals setting
  - ✓ Self-motivation
  - ✓ Assertiveness

**Expected Outcomes:**

The implementation of the above strategic actions will assist the primiparous mothers to:

- develop the ability and skills for exclusive breastfeeding self-evaluation capabilities
- gain confidence in planning for exclusive breastfeeding and to adopt positive perceptions towards the outcomes of exclusive breastfeeding within the first six months post-delivery;
- develop the ability to make independent decision about the breastfeeding methods.

**Measurable Indicators:**

By the second antenatal care visit, primiparous mothers should:

- have a clear plan for exclusive breastfeeding
- have strong motivation for exclusive breastfeeding within the first six months post-delivery
- be confident and able to verbalise their fears and negative perceptions about exclusive breastfeeding.

## **Strategic Objective 2:**

- *To assist primiparous mothers to increase their exclusive breastfeeding self-efficacy capabilities*

### **Rationale:**

Breastfeeding self-efficacy was measured by looking at the beliefs and confidence of primiparous mothers regarding their capabilities to take independent decision about exclusive breastfeeding. The results of this study showed that low level of exclusive breastfeeding self-efficacy has negative influence on exclusive breastfeeding practice within the first six months.

Therefore, any activity aimed at promoting exclusive breastfeeding among primiparous mothers should consider minimizing factors that erode their confidence and maximizing those that increase their confidence in taking independent decision regarding exclusive breastfeeding.

This second strategic objective is related to the principle of goal-oriented self-efficacy. This principle involves the belief in the likelihood of achieving the set breastfeeding goal. Social cognitive theory argues that one's belief in the likelihood of achieving his/her goal is motivating in itself and task-oriented self-efficacy increases the individual's efforts and persistence towards challenging tasks, thereby, increasing the likelihood of completing the task (Bandura 2000).

### **Strategic actions:**

- Reinforce the sense of self-efficacy throughout the pregnancy
- Integrate Social Cognitive Skills Training with focus on exclusive breastfeeding into antenatal care health education from the second ANC visits:
  - ✓ Social modelling
  - ✓ Verbal persuasion

### **Expected Outcomes:**

The implementation of these strategic actions will assist the primiparous mothers to:

- gain confidence by learning from significant others who have been successful in exclusive breastfeeding
- believe in their self-capabilities to engage in exclusive breastfeeding
- acquire mastery of skills in relation to exclusive breastfeeding
- reinforce the skills acquired through the implementation of the strategic actions of the first strategic objective

**Measurable Indicators:**

At the term of their pregnancy, primiparous mothers should:

- have achieved all the expected outcomes of the first strategic objectives
- have high breastfeeding self-efficacy level
- be able to freely communicate to others about the rationale and methods of breastfeeding
- be able to demonstrate the ability to take independent decision

**Strategic Objective 3:**

- *To assist primiparous mothers to enhance their capabilities to take control over their exclusive breastfeeding practices*

***Rationale:***

The third strategic objective is related to the principle of empowerment. Empowerment in the context of breastfeeding requires primiparous mothers to have the abilities and greater control over the decision to breastfeed. Within the perspective of health promotion, empowerment is defined as “a process through which people gain greater control over decision and actions affecting their health” (WHO/HPR/HEP/98.1).

This strategic objective is inextricably linked to the second strategic objective on self-efficacy. From the perspective of social cognitive theory, self-efficacy belief alone is not enough to engage the desired action. It operates under other determinants in the regulation of behaviour. People’s belief to produce a desired change should be based on the belief that she/he has power to produce that



desired change. In the same manner, the skills to exercise power or control alone are not enough for one to act; but it is required a strong sense of self-efficacy to use those skills effectively and consistently under difficult circumstances (Bandura 2000).

The researcher believed that activities aimed at promoting exclusive breastfeeding among primiparous mothers should also consider enhancing their capabilities to manage and overcome factors that may negatively affect their control over the decision to breastfeed.

### **Strategic actions:**

- Reinforce the sense of self-control throughout the pregnancy
- Integrate Social Cognitive Skills Training with focus on exclusive breastfeeding into antenatal care health education from the first ANC visits:
  - ✓ Coping skills
  - ✓ Stress management skills
  - ✓ Individual Resilience Techniques

### **Expected Outcomes:**

The implementation of these strategic actions will assist the primiparous mothers to:

- gain control over their decisions to exclusively breastfeed
- overcome barriers to exclusive breastfeeding
- acquire high self-efficacy
- reinforce the skills acquired through the implementation of the strategic actions of the first two strategic objective

### **Measurable Indicators:**

At the term of their pregnancy, primiparous mothers should:

- have identified potential barriers to exclusive breastfeeding
- have plans on how to overcome these barriers
- have achieved high resilience level
- be able to demonstrate the ability to take independent decision

#### **5.4.2 KRA 2: Create an enabling environment for EBF**

The overall goal of this KRA is to create an environment that support the development of individual social cognitive attributes associated with high predictive exclusive breastfeeding practice among primiparous mothers. It is guided by the enabling and mediation principles as illustrated in Table 21.

Owing to the social cognitive theory (Bandura 1997), the researcher believed that primiparous mothers' high self-efficacy and positive outcome expectance coupled with a supportive environment will improve long-term motivation and promote exclusive breastfeeding. It is further argued that in an unsupportive breastfeeding environment, primiparous mothers with high self-efficacy with increase their efforts toward exclusive breastfeeding.

In the context of health promotion, enabling means “taking action in partnership with individuals or groups to empower them, through the mobilisation of human and material resources, to promote and protect their health” (WHA51.12). It differs from empowerment on the principle of partnership and on the mobilisation of resources with health workers and other health advocacy groups acting as catalyst for health promotion (WHO/HPR/HEP/98.1). It means that health care providers in charge of ANC, PNC and other maternal and child health services either at health facility or community and health and nutrition programme managers should ensure that primiparous mothers are empowered to take well-informed decision about breastfeeding.

#### **Strategic Objective 4:**

- *To establish supportive social networks for exclusive breastfeeding*

##### ***Rationale:***

Supportive social network within the social cognitive theory may take several forms including social persuasion to increase self-efficacy, provision of feedback, and direct cues to action (McAlister et al. 2008). Bandura (1998) argued that people who are verbally persuaded about their capabilities to master given activities are likely to engage more energy and sustain this energy to overcome adversity.

The researcher believed that social persuasion within a supportive social network has great potential to strengthen exclusive breastfeeding self-efficacy among primiparous mothers. Primiparous mothers require access to structured social network that support exclusive breastfeeding.

### **Strategic actions:**

- Establish exclusive breastfeeding social support groups within their practice
- Use social persuasion and mastery of experience techniques to build primiparous mothers confidence and capabilities for exclusive breastfeeding
  - ✓ Organise group discussions around the meaning of exclusive breastfeeding to primiparous mothers, and ensure that they clearly understand the meaning and intent of exclusive breastfeeding through questions and answers.
  - ✓ Demonstrate how to practice exclusive breastfeeding through video, flip chart and/or role plays.
  - ✓ Ensure primiparous mothers demonstrate breastfeeding techniques; such as attachment, during the antenatal care visits so that they will be able to exercise effective breastfeeding during postpartum period.
  - ✓ Support the primiparous mothers learn recommended key messages on optimal breastfeeding

### **Expected Outcomes:**

The implementation of the above strategic actions will assist the primiparous mothers to:

- access exclusive breastfeeding resources within their social network
- have access to accurate information regarding breastfeeding
- learn from others
- gain confidence in planning for exclusive breastfeeding
- adopt positive perceptions towards exclusive breastfeeding within the first six months post-delivery;
- overcome the cultural barriers and misconception regarding breastfeeding from the significant others;

- develop the ability to make independent decision about the breastfeeding methods.

### **Measurable Indicators:**

During the course of their pregnancy and post-delivery, primiparous mothers should:

- have identified the exclusive breastfeeding support resources available within their social network
- have a clear plan on how and when to use these resources
- have made use of these resources
- have strong motivation for exclusive breastfeeding within the first six months post-delivery
- be confident and able to verbalise their fears and negative perceptions about exclusive breastfeeding.

### **Strategic Objective 5:**

- *To facilitate a conducive environment for exclusive breastfeeding*

#### ***Rationale:***

An environment conducive to exclusive breastfeeding is an environment that responds to the principle of mediation. The principle of mediation is defined in the context of health promotion as “a process through which the different interests of individuals and communities, and different sectors are reconciled in ways that promote and protect health” (WHA51.12). It is believed that efforts toward behaviour change may produce conflicts arising from differences in individual or organisational practices among others. These conflicts should be reconciled in ways which promote health (WHO/HPR/HEP/98.1).

In relation to the promotion of exclusive breastfeeding, it requires the commitment of health care providers in charge of ANC, PNC and other maternal and child health services and health nutrition programme managers either at health facility or community levels and health to assist primiparous mothers to resolve conflicts that may arise between their desire to exclusively breastfeed

and potential misunderstanding or myths and barriers to exclusive breastfeeding.

**Strategic actions:**

- Health care providers in charge of ANC, PNC and other maternal and child health services either at health facility or community should:
  - ✓ Direct their counselling and health education sessions on building the self-efficacy and outcome expectancy of the primiparous mothers.
  - ✓ Reinforce their health education sessions on breastfeeding to go beyond providing only information on breastfeeding.
  - ✓ Organise a separate and focused breastfeeding counselling sessions for the primiparous mothers.
  - ✓ Use effective counselling techniques to ensure primiparous mothers internalise exclusive early initiation and exclusive breastfeeding and the associated benefits.
  - ✓ Identify barriers and challenges for exclusive breastfeeding intentions and practices among primiparous mothers, and support them address these barriers through continuous follow ups during ANC, PNC and health facility visits.
  - ✓ Identify gate keepers of exclusive breastfeeding practices among the primiparous mothers, and reach them with breastfeeding social and behaviour change communication key messages.
  - ✓ Reinforce the sense of self-control through the pregnancy
- Health and nutrition programme managers should:
  - ✓ Give special attention for primiparous mothers while programming and targeting for exclusive breastfeeding practices.
  - ✓ Design and implement their intervention for improving exclusive breastfeeding to focus on improving the self-efficacy and outcome expectancy of these groups of women.
  - ✓ Advocate for effective utilisation of the maternity leave for women who are employed. This would be through raising awareness and commitment for

employer and the primiparous mothers that maternity leave is among the key rights and legislation in the Ethiopian laws and procedures.

- ✓ Work with other sectors; such as the women children and youth office, to advocate for adoption of a longer duration maternity leave. Three months of maternity would not be enough to fully practice the six months of EBF recommendation. The health and economic returns or gains of longer durations of maternity leave would be huge.
- ✓ Ensure that health and nutrition programmes for mothers, new-borns and children have social and behavioural change components aiming at improving the self-efficacy and outcome expectancies of the primiparous mothers regarding EBF promotion, protection and support.
- ✓ Allocate budget for the development and implementation of key social and behaviour change communication messages on breastfeeding self-efficacy and outcome expectancy in view of promoting EBF among primiparous mothers.
- ✓ Organise and facilitate workshop on how to improve the breastfeeding self-efficacy and outcome expectancy of primiparous mothers using the SCT.
- ✓ Collaborate with other sectors and agencies on women empowerment activities.

### **Expected Outcomes:**

The implementation of the above strategic actions will assist primiparous mothers to:

- have access to an environment that is conducive to exclusive breastfeeding
- overcome environmental barriers to exclusive breastfeeding
- overcome policy related barriers to exclusive breastfeeding
- gain confidence in planning for exclusive breastfeeding
- adopt positive perceptions towards exclusive breastfeeding within the first six months post-delivery
- develop abilities to make independent decision on breastfeeding methods.

### **Measurable Indicators:**

During the course of their pregnancy and post-delivery period, primiparous mothers should:

- enjoy an environment conducive to exclusive breastfeeding
- have strong motivation for exclusive breastfeeding within the first six months post-delivery
- have high breastfeeding self-efficacy level
- be able to overcome barriers related to exclusive breastfeeding
- be able to demonstrate the ability to take independent decision

### **5.5 CONCLUSION**

The successful implementation of the social cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Addis Ababa, Ethiopia as described above will require among others:

- in-service training on social cognitive skills for healthcare providers with focus on how to build self-efficacy and outcome expectancy,
- the development of self-efficacy and outcome expectance assessments tools relevant to the Ethiopian context, and
- additional support and resources from the healthcare managers.

## CHAPTER SIX

### CONCLUSION, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

#### 6.1 CONCLUSION

Ethiopian government adopted and implementation strategies to promote optimal infant and young child breastfeeding in line of the World Health Organisation Global Strategy for Infant and Young Child Feeding. However, the rate of breastfeeding, more precisely exclusive breastfeeding remains low. Most previous studies conducted in Ethiopia focused on breastfeeding among multiparous mothers and little is known about exclusive breastfeeding among primiparous mothers. It is also known that multi-level factors including social-cognitive variables influence breastfeeding practices.

This study focused on primiparous mothers. Using a longitudinal approach, the results of the study as presented and discussed in Chapter Four make a significant contribution in the body of knowledge in terms of the prenatal social cognitive breastfeeding behaviour, the actual breastfeeding practices up to six months post-delivery and the level of associations between prenatal social cognitive behaviour and the actual breastfeeding practices. Through multiple logistic regression analysis, the study identified the social cognitive predictors of exclusive breastfeeding among primiparous mothers. Using these predictors as baseline, the researcher was able through three rounds Delphi to develop social cognitive strategies to promote exclusive breastfeeding among primiparous mothers described in Chapter Five.

The researcher believes that the implementation of the strategies described in Chapter Five would make a significant contribution in promoting exclusive breastfeeding practices among primiparous mothers, thereby improving child survival in Ethiopia.



## 6.2 RECOMMENDATIONS

Policy-makers at national level should:

- Integrate interventions aimed at building self-efficacy and positive outcome expectancy into the national Infant and Young Child Breastfeeding Strategy
- Provide training opportunities for healthcare providers on social cognitive skills training to enhance their contributions to the promotion of breastfeeding
- Establish a technical committee that should explore the operationalisation of the proposed strategies
- Select pilot site to test the proposed strategies
- Sponsor research on the development of self-efficacy and outcome expectancy assessment tools to be used in health facilities in the country.

Healthcare managers should:

- Facilitate the establishment of social support groups for exclusive breastfeeding for primiparous mothers
- Establish, promote and support implementation of baby friendly hospitals initiatives, which is a known strategy for improving breastfeeding, to promote exclusive breastfeeding among primiparous mothers.
- Operationalise the social cognitive strategies proposed in the study
- Support in-service training for their staff members on social cognitive skills training.

Health science educators and researchers should:

- Integrate social cognitive theory and skills training into breastfeeding components of the health professional students
- Undertake further research with focus on:

- ✓ Assessment tools for self-efficacy and outcome expectancy among primiparous mothers with the Ethiopian context
- ✓ Community based qualitative research on exclusive breastfeeding among primiparous mothers
- ✓ Effectiveness of the proposed strategies.

### **6.3 LIMITATIONS OF THE STUDY**

The longitudinal study focused on the respondents selected from the health facilities, the results could not be generalised to the general public and particularly to those mothers who still prefer providing child birth at home. As the study was a longitudinal, the issue of loss to follow up was difficult to control.

## REFERENCES

- Adhikari, M., Khanal, V., Karkee, R. & Gavidia, T. 2014. Factors associated with early initiation of breastfeeding among Nepalese mothers: further analysis of Nepal Demographic and Health Survey, 2011. *International Breastfeeding Journal*, 9, 1-9.
- Agu, U. & Agu, M. C. 2011. Knowledge and Practice of Exclusive Breastfeeding among Mothers in a Rural Population in South Eastern Nigeria. *Tropical Journal of Medical Research* [Online], 15. Available: <http://www.ajol.info/index.php/tjmr/article/view/74756/65361>.
- Al-Akour, N. A., Khassawneh, M. Y., Khader, Y. S., Ababneh, A. A. & Haddad, A. M. 2010. Factors affecting intention to breastfeed among Syrian and Jordanian mothers: a comparative cross-sectional study. *International Breastfeeding Journal*, 5.
- Al-Ali, N., Hatamleh, R. & Khader, Y. 2012. Female Public Jordanian University undergraduate students' intentions and attitudes toward breastfeeding: application of self-objectification theory. *Breastfeeding Review*, 21, 31-42.
- Aluko-Arowolo, S. O. & Adekoya, J. A. 2012. Exclusive Breastfeeding in the Contexts of Socio-Cultural Challenges and Mothers' Health in Rural and Mixed Urban Areas of Ijebu, South Western Nigeria. *Gender & Behaviour*, 10, 4657-4677.
- Antonius, R. 2013. *Interpreting Quantitative Data with IBM SPSS statistics*, SAGE.
- Anyanwu, O. U., Ezeonu, C. T., Ezeanosike, O. B. & Okike, C. O. 2014. The practice of breastfeeding by healthcare workers in the Federal Teaching Hospital, Abakaliki, southeastern Nigeria. *South African Journal of Child Health*, 8, 55-58.
- Awi, D. & Alikor, E. 2006. Barriers to timely initiation of breastfeeding among mothers of healthy full-term babies who deliver at the University of Port Harcourt Teaching Hospital. *Nigerian Journal of Clinical Practice*, 9, 57-64.
- Babakazo, P., Donnen, P., Akilimali, P., Mala Ali, N. M. & Okitolonda, E. 2015. Predictors of discontinuing exclusive breastfeeding before six months among mothers in Kinshasa: a prospective study. *International Breastfeeding Journal*, 10.
- Babbie, E. 2010. *The Practice of Social Research*, Belmont, USA, Wadsworth, Cengage Learning.
- Bandura, A. 1982. Self-Efficacy Mechanism in Human Agency. *American Psychologists*.
- Bandura, A. 2000. Cultivate Self-Efficacy for Personal and Organizational Effectiveness. In: Locke, E. A. (ed.) *Handbook of principles of organization behavior*. UK: Blackwell Publishers.
- Belay, S. & Haidar, J. 2014. Effect of prenatal education on breastfeeding initiation and exclusive breast feeding rate in selected health institutions of Hawassa city, the capital of SNNPR, Ethiopia. *East African Journal of Public Health*, 11, 655-664.

- Berra, W. G. 2013. Knowledge, Perception and Practice of Mothers/Caretakers and Family's regarding Child Nutrition (under 5 years of age) in Nekemte Town, Ethiopia. *Science, Technology and Arts Research Journal*, 2, 78-86.
- Boslaugh, S. & McNutt, L.-A. 2008. *Encyclopedia of epidemiology, Volume 1&2*, Sage Publications,.
- Bowling, A. 2005. Quantitative Social Science; the survey. *In: Bowling, A. & Ebrahim, S. (eds.) Handbook of Health Research Methods; Investigation, Measurement and Analysis*. Berkshire, England: Open University Press.
- Bowling, A. 2009. *Research Methods in Health; Investigating Health and Health Services* Open University Press.
- Brown, A. & Davies, R. 2014. Fathers' experiences of supporting breastfeeding: challenges for breastfeeding promotion and education. *Maternal and Child Nutrition*, 10, 510-526.
- Bruce, N., Pope, D. & Stanistreet, D. 2008. *Quantitative Methods for Health Research: A Practical Interactive Guide to Epidemiology and Statistics*, West Sussex, England, John Wiley & Sons Ltd,.
- CDC, FHI & WHO 1991. *An applied approach to reproductive health*.
- CHERG. 2013. *Breastfeeding Promotion Interventions on Breastfeeding Rates* [Online]. Available: <http://cherg.org/projects/List-summaries/breastfeeding-promotion.html> [Accessed February 11 2013].
- Chezem, J., Friesen, C. & Boettcher, J. 2003. Breastfeeding Knowledge, Breastfeeding Confidence, and Infant Feeding Plans: Effects on Actual Feeding Practices. *JOGNN Clinical Research*, 32, 40-47.
- Coreil, J., Bryant, C. A. & Henderson, J. N. 2001. *Social and Behavioral Foundations of Public Health*, California, Sage Publications, Inc.
- Countdown to 2015. 2014. Fulfilling the Health Agenda for Women and Children the 2014 Report for Ethiopia.
- CSA 2007. 2007 Population and Housing Census of Ethiopia. Central Statistical Agency.
- CSA 2014. Ethiopia Mini Demographic and Health Survey 2014.
- CSA & ICF 2012. Ethiopia Demographic and Health Survey 2011. Addis Ababa & Calverton, USA: CSA & ICF International.
- Dennis, C.-L. & Faux, S. 1999. Development and Psychometric Testing of the Breastfeeding Self-Efficacy Scale. *Research in Nursing & Health*, 22, 399-409.
- Downie, J., Henderson, S., Juliff, D., Munns, A. & Wichmann, H. 2006. Community health nursing research priorities: a Delphi investigation. *Neonatal, Paediatric and Child Health Nursing*, 9, 12-21.

- Dreesmann, F. F. 2014. *Breastfeeding knowledge among low-income first-time pregnant women*. Masters, California State University,.
- Eidman, C. K. 2011. *Enhancing Breastfeeding Self-Efficacy through Prenatal Education*. Master of Arts in Nursing Theses, St. Catherine University.
- El-Gilany, A.-H., Sarraf, B. & Al-Wehady, A. 2012. Factors associated with timely initiation of breastfeeding in Al-Hassa province, Saudi Arabia. *Eastern Mediterranean Health Journal*, 18, 250-254.
- Ethiopia. 1993. Labour Proclamation No. 42/1993. *Negarit Gazeta*.
- FMOH 2005. National Strategy for Child Survival in Ethiopia. *In: Health, F. (ed.)*. Addis Ababa: FMOH.
- FMOH 2010. Health Sector Development Programme IV: 2010/11 – 2014/15. *In: Programme, P. a. (ed.)*. Addis Ababa: FMOH.
- FMOH 2012. Health and Health Related Indicators. Addis Ababa: Federal Ministry of Health, Ethiopia.
- Giles, M., Connor, S., McClenahan, C. & Mallet, J. 2010. Attitudes to breastfeeding among adolescents. *Journal of Human Nutrition and Dietetics*, 23, 285-293.
- Glassman, M. E., McKearney, K., Saslaw, M. & Sirota, D. R. 2014. Impact of Breastfeeding Self-Efficacy and Sociocultural Factors on Early Breastfeeding in an Urban, Predominantly Dominican Community. *BREASTFEEDING MEDICINE*, 9, 301-307.
- Hoskins, C. N. & Mariano, C. 2004. *Research in nursing and health: understanding and using quantitative and qualitative methods*, New York, Springer Publishing.
- Hsu, C.-C. & Sandford, B. A. 2010. *Encyclopedia of Research Design; Delphi Technique*, Thousand Oaks, SAGE Publications, Inc.
- Imdad, A., Yakoob, M. Y. & Bhutta, Z. A. 2011. Effect of breastfeeding promotion interventions on breastfeeding rates, with special focus on developing countries. *BMC Public Health*, 11, 2-8.
- Ishak, S., Adzan, N. A. M., Quan, L. K., Shafie, M. H., Rani, N. A. & Ramli, K. G. 2014. Knowledge and Beliefs About Breastfeeding Are Not Determinants for Successful Breastfeeding. *BREASTFEEDING MEDICINE*, 9.
- Kafulafula, U. K., Hutchinson, M. K., Gennaro, S., Guttmacher, S. & Kunitawa, A. 2013. Exclusive breastfeeding prenatal intentions among HIV-positive mothers in Blantyre, Malawi: a correlation study. *BMC Pregnancy and Childbirth*, 13.
- Kaikini, K. L. & Hyrkas, K. 2014. Mothers' Intentions to Breastfeed and Hospital Practices on Breastfeeding: A Longitudinal Study at 6 Months After Birth on Predictors of Breastfeeding in a Cohort of Mothers From a Large Northern New England Medical Center. *JOGNN*, 43, S68-S80.

- Kambale, M. J. 2011. Social determinants of breastfeeding in Italy. *African Health Sciences*, 11, 508 - 517.
- Kanhadilok, S. & McGrath, J. M. 2015. An Integrative Review of Factors Influencing Breastfeeding in Adolescent Mothers. *The Journal of Perinatal Education*, 24, 119-127.
- Kelley, K., Clark, B., Brown, V. & Sitz, J. 2003. Methodology matters: Good practice in the conduct and reporting of survey research. *International journal of quality in health care*, 15, 261-266.
- Kervin, B. E., Kemp, L. & Pulver, L. J. 2012. Types and timing of breastfeeding support and its impact on mothers' behaviours. *Journal of Pediatrics and Child Health*, 46, 85-91.
- Kleinbaum, D. G., Sullivan, K. M. & Barker, N. D. 2008. *A Pocket Guide to Epidemiology*, Atlanta, USA, Springer.
- Kuzma, J. 2013. Knowledge, attitude and practice related to infant feeding among women in rural Papua New Guinea: a descriptive, mixed method study. *International Breastfeeding Journal*, 8.
- Leshabari, S. C., Blystad, A. & Moland, K. M. 2007. Difficult choices: Infant feeding experiences of HIV-positive mothers in northern Tanzania. *Journal of Social Aspects of HIV/AIDS*, 4, 544-555.
- Lewallen, L. P. 2006. A Review of Instruments Used to Predict Early Breastfeeding Attrition. *Journal of Perinatal Education*, 15, 26-41.
- Lewallen, L. P., Dick, M. J., Flowers, J., Powell, W., Zickefoose, K. T., Wall, Y. G. & Price, Z. M. 2006. Breastfeeding Support and Early Cessation. *JOGNN*, 35, 166-172.
- Litwin, M. S. 2003. *The Survey Kit; How to Assess and Interpret Survey Psychometrics*, New Delhi, India, Sage Publications.
- Loke, A. Y. & Chan, L.-K. S. 2013. Maternal Breastfeeding Self-Efficacy and the Breastfeeding Behaviors of Newborns in the Practice of Exclusive Breastfeeding. *JOGNN*, 42, 672-684.
- Maru, Y. & Haidar, J. 2009. Infant feeding practice of HIV positive mothers and its determinants in selected health institutions of Addis Ababa, Ethiopia. *Ethiopian Journal of Health Development*, 23, 107-114.
- Matlakala, M. C. 2012. *Strategies to Overcome the Challenges in The Management Of Larger Critical Care Units*. University of South Africa.
- Matthews, B. & Ross, L. 2010. *Research Methods: A practical guide for the social sciences*, England, Pearson Education Limited.
- McAlister, A. L., Perry, C. L. & Parcel, G. S. 2008. How Individuals, Environments, and Health Behaviors Interact: Social Cognitive Theory. *Health Behavior and Health Education; Theory, Research, and Practice*. 4th ed. USA: John Wiley & Sons, Inc.

- McKinley, N. M. & Hyde, J. S. 2004. Personal attitude or structural factors? A contextual analysis of breastfeeding duration. *Psychology of Women Quarterly*, 28, 388-399.
- Mitchell-Box, K. & Braun, K. L. 2012. Fathers' Thoughts on Breastfeeding and Implications for a Theory-Based Intervention. *JOGNN*, 41, E41-E50.
- MSG. 2013. *Strategy - Definition and Features* [Online]. Available: <http://www.managementstudyguide.com/strategy-definition.htm>.
- Nakar, S., Peretz, O., Hoffman, R., Grossman, Z., Kaplan, B. & Vinker, S. 2007. Attitudes and knowledge on breastfeeding among paediatricians, family physicians, and gynaecologists in Israel. *Acta Pædiatrica*, 10.1111/j.1651-2227.2007.00310.x, 848-851.
- Nigatu, Y. T. & Worku, N. 2014. Optimal breastfeeding practice and associated factors amongst working mothers. *East African Journal of Public Health*, 11, 704-715.
- Noble-Carr, D. & Bell, C. 2012. Exposed: younger mothers and breastfeeding. *Breastfeeding Review*, 20, 27-38.
- O'Brien, M., Buikstra, E. & Hegney, D. 2008. The influence of psychological factors on breastfeeding duration. *Journal of Advanced Nursing*, 63.
- Ogunba, B. & Agwo, E. 2014. Knowledge, attitude and intending practice of female undergraduates about breastfeeding. *African Journal of Food, Agriculture, Nutrition and Development* 14, 9039-9054.
- Okafor, I., Olatona, F. & Olufemi, O. 2014. Breastfeeding practices of mothers of young children in Lagos, Nigeria. *Nigeria Journal of Pediatrics*, 41, 43-47.
- Olatona, F., Ginigeme, O., Roberts, A. & Amu, E. 2014. Infant feeding practices in the first six months of life among HIV positive mothers attending Teaching Hospitals in Lagos, Nigeria. *Nigeria Journal of Pediatrics*, 41, 64-69.
- Onah, S., Osuorah, D. I., Ebenebe, J., Ezechukwu, C., Ekwochi, U. & Ndukwu, I. 2014. Infant feeding practices and maternal socio-demographic factors that influence practice of exclusive breastfeeding among mothers in Nnewi South-East Nigeria: a cross-sectional and analytical study. *International Breastfeeding Journal*, 9, 1-18.
- Pallant, J. 2010. *SPSS SURVIVAL MANUAL: A step by step guide to data analysis using SPSS*, Berkshire, England, Open University Press.
- Pearson, A., Field, J. & Jordan, Z. 2007. *Evidence-based clinical practice in nursing and healthcare: assimilating research, experience, and expertise*, Victoria, Australia, Blackwell Publishing Ltd.
- Pelletier, D. L. & Frongillo, E. A. 2003. Changes in Child Survival Are Strongly Associated with Changes in Malnutrition in Developing Countries. *Journal of Nutrition*, 133, 107-119.

- Persad, M. D. & Mensinger, J. L. 2007. Maternal Breastfeeding Attitudes: Association with Breastfeeding Intent and Socio-demographics Among Urban Primiparas. *Journal of Community Health*, 33, 53–60.
- Quinn, C. & Bonuck, K. 2012. Identifying Breastfeeding-Sensitive Conditions by Expert Consensus. *Journal of Human Lactation*, 28, 535-542.
- Raju, T. N. K. 2011. Breastfeeding Is a Dynamic Biological Process-Not Simply a Meal at the Breast. *Breastfeeding Medicine*, 6, 257-259.
- Riordan, J. 2005. *Breastfeeding and Human Lactation*, Kansas, Jones and Bartlett Publishers.
- Saied, H., Mohamed, A., Suliman, A. & Al Anazi, W. 2013. Breastfeeding knowledge, Attitude and Barriers among Saudi Women in Riyadh. *Journal of Natural Sciences Research*, 3.
- Schwarzer, R. & Luszczynska, A. 2005. Self-Efficacy, Adolescents' Risk-Taking Behaviors, and Health. *Self-Efficacy Beliefs of Adolescents*. Information Age Publishing.
- Scott, J. A., Shaker, I. & Reid, M. 2004. Parental Attitudes Toward Breastfeeding: Their Association with Feeding Outcome at Hospital Discharge. *BIRTH*, 31, 125-131.
- Semenic, S., Loiselle, C. & Gottlieb, L. 2008. Predictors of the Duration of Exclusive Breastfeeding Among First-Time Mothers. *Research in Nursing & Health*, 31, 428–441.
- Setegn, T., Gerbaba, M. & Belachew, T. 2011. Determinants of timely initiation of breastfeeding among mothers in Goba Woreda, South East Ethiopia: A cross sectional study. *BMC Public Health*, 11.
- Shwetal, B., Pooja, P., Neha, K., Amit, D. & Rahul, P. 2012. Knowledge, attitude and practice of postnatal mothers for early initiation of breast feeding in the Obstetric Wards of a Tertiary Care Hospital of Vadodara City. *National Journal of Community Medicine*, 3, 305-309.
- Singh, K. 2007. *Quantitative Social Research Methods*, New Delhi, Sage Publications.
- Spark, A. J. 2007. *Nutrition in public health: principles, policies, and practice*, United States, Taylor & Francis Group, LLC.
- Tarrant, R. C., Younger, K. M., Sheridan-Pereira, M., White, M. J. & Kearney, J. M. 2009. The prevalence and determinants of breast-feeding initiation and duration in a sample of women in Ireland. *Public Health Nutrition*, 13, 760–770.
- Tawiah-Agyemang, C., Kirkwood, B., Edmond, K., Bazzano, A. & Hill, Z. 2008. Early initiation of breast-feeding in Ghana: barriers and facilitators. *Perinatology*, 28, S46–S52.
- Tönz, O. 2000. Breastfeeding in modern and ancient times: facts, ideas, and Beliefs. In: koletzko, B., Michaelsen, K. & Hernell, O. (eds.) *Short and long term effects of breast feeding on child health*. New York: Kluwer.



- Trochim, W. M. 2006. *The Research Methods Knowledge Base*. Second ed.
- UNAIDS 2013. *Global Report: UNAIDS Report on the global AIDS epidemic 2013*. UNAIDS.
- UNDP 2015. *National Human Development Report 2014: Accelerating Inclusive Growth for Sustainable Human Development in Ethiopia*. Addis Ababa, Ethiopia: UNDP.
- UNICEF 2012a. *Infant and Young Child Feeding Programming Status: Results of 2010 - 2011 assessment of key actions for comprehensive infant and young child feeding programmes in 65 countries*. New York.
- UNICEF 2012b. *Programming Guide: Infant and Young Child Feeding*, New York, UNICEF.
- UNICEF, WHO, World-bank & United-Nations 2013. *Levels & Trends in Child Mortality Report: Estimates Developed by the UN Inter-agency Group for Child Mortality Estimation*. Geneva: UNICEF.
- Victor, R., Baines, S. K., Agho, K. E. & Dibley, M. J. 2013. Determinants of breastfeeding indicators among children less than 24 months of age in Tanzania: a secondary analysis of the 2010 Tanzania Demographic and Health Survey. *BMJ Open* 3.
- Wambach, K. A. 1997. Breastfeeding Intention and Outcome: A Test of the Theory of Planned Behavior. *Research in Nursing & Health*, 20, 51–59.
- WFI. 2012. *Gandhi 2020* [Online]. Available: [http://www.wfi.org.et/index.php?option=com\\_content&view=article&id=31&Itemid=3](http://www.wfi.org.et/index.php?option=com_content&view=article&id=31&Itemid=3) [Accessed September 30 2014].
- WHO 2007. *Indicators for assessing infant and young child feeding practices. Part 1: Definitions*, Washington D.C., USA.
- WHO 2009. *Infant and young child feeding: Model Chapter for textbooks for medical students and allied health professionals*, WHO.
- WHO. 2012. *10 facts on Breastfeeding* [Online]. WHO. Available: <http://www.who.int/features/factfiles/breastfeeding/en/index.html>, [Accessed May 25 2014].
- WHO. 2013a. *Africa Health Observatory: Ethiopia Introduction to Country* [Online]. WHO. Available: [http://www.aho.afro.who.int/profiles\\_information/index.php/Ethiopia:Introduction\\_to\\_Country\\_Context](http://www.aho.afro.who.int/profiles_information/index.php/Ethiopia:Introduction_to_Country_Context) [Accessed November 28 2013].
- WHO 2013b. *Essential nutrition actions: improving maternal, newborn, infant and young child health and nutrition.*, Geneva, Switzerland, WHO Press.
- WHO 2013c. *Health Promotion: Strategy for the African Region*, WHO Regional Office for Africa.

- WHO. 2013d. *Promoting proper feeding for infants and young children* [Online]. WHO. Available: <http://www.who.int/nutrition/topics/infantfeeding/en/index.html> [Accessed April 1 2013].
- WHO 2015. *WHO recommendations on health promotion interventions for maternal and newborn health*, Geneva.
- WHO, UNAIDS, UNDP & UNICEF 2010. *Guidelines on HIV and infant feeding: Principles and recommendations for infant feeding in the context of HIV and a summary of evidence*, Geneva, WHO.
- WHO & UNICEF. 2015. *Global Nutrition Targets 2025: Breastfeeding policy brief* [Online]. Available: [http://who.int/nutrition/publications/globaltargets2025\\_policybrief\\_breastfeeding/en/](http://who.int/nutrition/publications/globaltargets2025_policybrief_breastfeeding/en/) [Accessed August 26 2015].
- Wu, D.-S., Hu, J., McCoy, T. P. & Efid, J. T. 2014. The effects of a breastfeeding self-efficacy intervention on short-term breastfeeding outcomes among primiparous mothers in Wuhan, China. *Journal of Advanced Nursing*, 70, 1867-79.

## ANNEXURE 1: QUESTIONNAIRE FOR PHASE ONE OF THE STUDY

Questionnaire on breastfeeding practices among primiparous mothers in Addis Ababa

Interviewer Identification number: \_\_\_\_\_

Participant Identification Number: \_\_\_\_\_

### INSTRUCTIONS TO THE INTERVIEWERS:

1. Please read each question clearly
2. Where applicable, ask the question in the language familiar to the participant
3. Double check the answer with the participant before writing it down in the space provided

### SCREENING INFORMATION

|   | First stage<br>Interview-<br>Prenatal<br>Period | Second stage<br>interview:<br>0-48 hours<br>post-delivery | Third stage<br>interview: 6<br>months post-<br>delivery | Office<br>use |
|---|---|---|---|---------------|
| Date and time of the interview  |   |   |   |               |
| Language used during the interview  |   |   |   |               |
| Did the participant deliver by Caesarean section?   |   | Yes<br>No   |   |               |
| Was it a still born baby?   |   | Yes<br>No   |   |               |
| Were there any complications during delivery and immediate delivery?                            |   | Yes<br>No   |   |               |
| <b>Follow-up must be discontinued for any Yes answers to questions 3-5</b>                      |   |   |   |               |
| Is the participant willing to be interviewed?   |   | Yes<br>No   | Yes<br>No   |               |
| <b>If No, discontinue the interview</b>   |   |   |   |               |
| Please, provide any other reasons for not completing the three interviews with the participants |   |   |   |               |

### PART A: PRENATAL PERIOD

#### SECTION I: SOCIO-DEMOGRAPHIC INFORMATION

| Questions         | Responses                              | Office<br>use |
|-------------------|--|---------------|
| 1. Age in years   | _____ years                            |               |
| 2. Marital status | Single<br>Married<br>Separated/Widowed |               |

|  |   |  |
|--|---|--|
| 3. Religion affiliation  | Orthodox Christian<br>Catholic Christian<br>Protestant Christian<br>Muslim<br>Other (specify) _____ |  |
| 4. Highest level of educational                                      | No formal education<br>Primary level<br>Secondary level<br>Post-secondary level                     |  |
| 5. Employment status   | Not employed<br>Self-employed<br>Employed (full or part-time)                                       |  |
| 6. If <b>employed</b> , will your employer give you maternity leave? |   |  |
| 7. How much is your monthly family income                            | _____ Birr  |  |
| 8. How many people are living with you?                              | No one,<br>Siblings,<br>Parents,<br>Grandparents,<br>Close friend,<br>Others (Specify) _____        |  |

## SECTION II: PRENATAL BREASTFEEDING INTENTION

### 1. Mothers' planned breastfeeding feeding methods

|   | Answers                      | Office use |
|---|------------------------------|------------|
| 1. Do you intend to breastfeed your child?  | Yes<br>No<br>Not decided yet |            |
| If <b>you decided or when you will decide</b> to breastfeed, would you do it within the first hour of delivery?                             | Yes<br>No                    |            |
| If <b>you decided or when you will decide</b> to breastfeed, would you give your baby <b>ONLY the breast milk for the first six months?</b> | Yes<br>No                    |            |
| If <b>you decided or when you will decide</b> to breastfeed, for how long are you planning to breastfeed your child?                        | _____ (Duration in months)   |            |

## SECTION III: PRENATAL BREASTFEEDING OUTCOME EXPECTANCY

### 1. Mothers' Perceived values of breastfeeding outcome

The decision of some mothers to breastfeed their infant and young child is influenced by their beliefs about the results of breastfeeding and the perceived values of those results for the child and themselves. Please, indicate the extent to which you agree or disagree with each of the following using the following keys: **5: Totally agree; 4: Agree; 3: Undecided; 2: Disagree; 1: Totally disagree**

| Statements   | Your opinion |   |   |   |   |
|--|--------------|---|---|---|---|
|  | 1            | 2 | 3 | 4 | 5 |
| 1. Breast milk will protect my child from illnesses or infections.   |              |   |   |   |   |
| 2. Breastfeeding reduces the risk of excessive bleeding after delivery.  |              |   |   |   |   |
| 3. Breast milk contains enough nutrients that my child requires during the first six months of her/his life.       |              |   |   |   |   |
| 4. Breastfeeding is economical as I can save money by given my child only breast milk during the first six months. |              |   |   |   |   |
| 5. Breastfeeding will assist in strengthening the bond with my child.  |              |   |   |   |   |
| 6. My baby will be much more better if I don't add liquids/food in the first six months                            |              |   |   |   |   |

#### SECTION IV: PRENATAL BREASTFEEDING SELF-EFFICAY

The decision of some mothers to breastfeed their infant and young child is influenced by their confidence in their capabilities to successfully breastfeed the child. Please, indicate the extent to which you agree or disagree with each of the following statements using the following keys: **5: Totally agree; 4: Agree; 3: Undecided; 2: Disagree; 1: Totally disagree**

| Statements   | Your opinion |   |   |   |   |
|--|--------------|---|---|---|---|
|  | 1            | 2 | 3 | 4 | 5 |
| 1. I have everything needed to start breastfeeding my child immediately after I give birth             |              |   |   |   |   |
| 2. I will exclusively breastfeed my child for six months after giving birth.                           |              |   |   |   |   |
| 3. It will have no problem breastfeeding my child in the presence of family members                    |              |   |   |   |   |
| 4. I will have no problem breastfeeding my child in public places                                      |              |   |   |   |   |
| 5. I will exclusively breastfeed my child to breastfeed my child even at work                          |              |   |   |   |   |
| 6. It is my decision to bottle-feed my child   |              |   |   |   |   |
| 7. It is my decision not to give milk formula to my child during the first six months of his/her life. |              |   |   |   |   |

#### SECTION V: PRENATAL BREASTFEEDING SOCIO-STRUCTURAL FACTORS

##### 1. General knowledge about breastfeeding

The decision of some mothers to breastfeed their infant and young child is influenced by their knowledge of the benefits of breastfeeding, previous experience and attitude towards breastfeeding. Please, indicate the extent to which you agree or disagree with each of the following using the following keys: **5: Totally agree; 4: Agree; 3: Undecided; 2: Disagree; 1: Totally disagree**

| Statements  | Your opinion |   |   |   |   |
|---|--------------|---|---|---|---|
|   | 1            | 2 | 3 | 4 | 5 |
| 1. Breast milk is the best food for a new-born baby   |              |   |   |   |   |
| 2. A mother should start breastfeeding within one hour of delivery  |              |   |   |   |   |
| 3. Colostrum should be expressed and discarded  |              |   |   |   |   |
| 4. A mother should breastfeed her child for about 8 to 10 times in 24 hours (during day and night times)                  |              |   |   |   |   |
| 5. A mother should breastfeed her child for at least two years  |              |   |   |   |   |
| 6. Breastfeeding develops a strong bond between mother and baby   |              |   |   |   |   |
| 7. An infant with diarrhoea should be breastfed   |              |   |   |   |   |
| 8. Water or other liquids can be given in addition to breast milk to an infant during the first six months after delivery |              |   |   |   |   |
| 9. Breastfeeding can negatively affect the health of a mother   |              |   |   |   |   |

## 2. Previous experience with breastfeeding

| Questions  | Responses               | Office use |
|--|-------------------------|------------|
| 1. Were you breastfed as a child   | Yes<br>No<br>Don't know |            |
| 2. Does any of your family member has been breastfeeding her/his in the past six months?                 | Yes<br>No<br>Don't know |            |
| 3. Does any of your close friends has been breastfeeding her/his child in the past six months breastfed? | Yes<br>No<br>Don't know |            |
| 4. Have you received health education on breastfeeding during the ANC visits?                            | Yes<br>No               |            |

## 3. Views regarding the source of support for breastfeeding

The decision of some mothers to breastfeed their infant and young child is influenced by certain social and environmental factors such as family support and healthcare providers' support towards breastfeeding practices. Please, indicate the extent to which you agree or disagree with each of the following using the following keys: **5: Totally agree; 4: Agree; 3: Undecided; 2: Disagree; 1: Totally disagree**

| Statements  | Your opinion |   |   |   |   |
|---|--------------|---|---|---|---|
|   | 1            | 2 | 3 | 4 | 5 |
| 1. Healthcare providers have given me adequate information about breastfeeding during the last five months. |              |   |   |   |   |
| 2. My family is very supportive of breastfeeding  |              |   |   |   |   |
| 3. My spouse's/partner's is very supportive of breastfeeding  |              |   |   |   |   |
| 4. My close relatives' and friends are very supportive of breastfeeding.                                    |              |   |   |   |   |
| 5. My work environment is conducive to breastfeeding  |              |   |   |   |   |

## PART B: ACTUAL BREASTFEEDING PRACTICES

### SECTION VI: INFANT FEEDING WITHIN THE FIRST HOUR POST-DELIVERY

|  | Answers |    | Office use |
|--|---------|----|------------|
|  | Yes     | No |            |
| 1. Have you given your baby the breast milk in the first hour after giving birth?  |         |    |            |
| 2. Have you given your baby any of the following products in the first hour after birth?   |         |    |            |
| 1.1. vitamin/medicines as drop   |         |    |            |
| 1.2. ORS   |         |    |            |
| 1.3. Plain water   |         |    |            |
| 1.4. Infant formula  |         |    |            |
| 1.5. Milk (tinned, powdered, or fresh animal milk)   |         |    |            |
| 1.6. Clear broth (vegetable soup)  |         |    |            |
| 1.7. Juice or juice drinks   |         |    |            |
| 1.8. Sour milk or yoghurt  |         |    |            |
| 1.9. Thin porridge   |         |    |            |
| 1.10. Other (specify) _____  |         |    |            |
| 3. <b>If you have not given your baby the breast milk within the first hour of giving birth, was it due to any of the following reasons:</b> |         |    |            |
| 1. I have no adequate breast milk  |         |    |            |
| 2. I believe the new-born is not ready   |         |    |            |
| 3. I do not want to breastfeed   |         |    |            |
| 4. I gave birth by caesarean section   |         |    |            |
| 5. I have medical conditions that prevented me from breastfeeding  |         |    |            |
| 4. Other (specify) _____   |         |    |            |

**SECTION VII: INFANT FEEDING PRACTICE AT SIX MONTHS POST-DELIVERY**

|  | Answers |    | Office use |
|--|---------|----|------------|
|  | Yes     | No |            |
| 1. Have you been giving your baby the breast milk in the past six months?  |         |    |            |
| 2. Do you give your baby any of the following products in addition to the breast milk?                           |         |    |            |
| 1.1. vitamin/medicines as drop   |         |    |            |
| 1.2. ORS   |         |    |            |
| 1.3. Plain water   |         |    |            |
| 1.4. Infant formula  |         |    |            |
| 1.5. Milk (tinned, powdered, or fresh animal milk)   |         |    |            |
| 1.6. Clear broth (vegetable soup)  |         |    |            |
| 1.7. Juice or juice drinks   |         |    |            |
| 1.8. Sour milk or yoghurt  |         |    |            |
| 1.9. Thin porridge   |         |    |            |
| 1.10. Other (specify) _____  |         |    |            |
| <b>3. If you have given your baby any of the above products, was it because of any of the following reasons?</b> |         |    |            |
| 4. Low milk supply   |         |    |            |
| 5. The child not being satisfied   |         |    |            |
| 6. Mothers resume working  |         |    |            |
| 7. Breastfeeding was painful   |         |    |            |
| 8. Breastfeeding was time consuming  |         |    |            |
| 9. Physicians recommendation   |         |    |            |
| 10. Other (specify) _____  |         |    |            |



## ANNEXURE 2: DELPHI INSTRUMENTS

Please, indicate your evaluation of the proposed strategies within the social, economic, and cultural context of Addis Ababa, Ethiopia, as well as within the Ethiopian health system. Evaluate each strategy against of each of the evaluation criteria, and please use the following keys to express your agreement or disagreement: 4= strongly agree, 3 = agree, 2 = disagree, or 1 = strongly disagree for each of the proposed strategy

| Evaluation criteria   | Your opinion about the proposed strategies |   |   |    |
|---|--|---|---|----|
|   | SA   | A | D | SD |
| <b>1. Specificity:</b> The strategies as described focused on the promotion of exclusive breastfeeding  |  |   |   |    |
| <b>2. Relevance:</b> The strategies as described are appropriate for the promotion of exclusive breastfeeding in the Ethiopian context.                             |  |   |   |    |
| <b>3. Applicability:</b> The strategies as described can be used within the existing health programmes and used to promote exclusive breastfeeding among all women. |  |   |   |    |
| <b>4. Acceptability:</b> The strategies as described will be accepted by the primary health care providers and promoters  |  |   |   |    |
| <b>5. Effectiveness:</b> The strategies as described have the potential to increase the rate of exclusive breastfeeding.  |  |   |   |    |
| <b>6. Comparability:</b> The strategies as described are comparable to international standards.   |  |   |   |    |

## **ANNEXURE 3: INFORMED CONSENT**

University of South Africa  
Department of health Studies  
Telephone: 00251-911-316124  
E-mail: [53428307@mylife.unisa.ac.za](mailto:53428307@mylife.unisa.ac.za) or [agirma2005@gmail.com](mailto:agirma2005@gmail.com)

### **CONSENT FORM**

#### **SOCIAL-COGNITIVE STRATEGIES TO PROMOTE EXCLUSIVE BREASTFEEDING AMONG PRIMIPAROUS MOTHERS IN ETHIOPIA**

##### **INVITATION TO PARTICIPATE**

You are being asked to participate in this research study because you are randomly selected for study entitled 'social-cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Ethiopia'. The study will be conducted among similar mothers attending prenatal care in this hospital.

##### **PURPOSE:**

The purpose of the research project is to propose social-cognitive strategies to promote exclusive breastfeeding practice in Ethiopia. The research is approved by the ethical review committee of the University of South Africa, the Addis Ababa City Administration Health Bureau and ----- hospital. The research will document attitudes, intentions, practices as well as other factors related with breastfeeding practices and behaviours. The findings of the research will be used in the development of strategies to promote exclusive breastfeeding in Ethiopia. In addition, the research finding will help health professionals and health authority to refocus breastfeeding promotion strategies and interventions; which consequently lead to the improvement of the child survival and to effective management of resources in developing countries like Ethiopia.

##### **PROCEDURES**

Participation in this study is voluntary and no incentive will be provided to be part of the research. However, participants will get health information on breastfeeding benefits at the end of the interview. All the information you will provide us will be confidential. If you accept to register as a participant in this study, I will ask you some questions regarding your intentions, practices and behaviors on breastfeeding in three rounds; first at your last antenatal visit, then immediately after you give birth

or within a week and finally after six months of your delivery. If I will not get you in this facility after your delivery times, I will ask you through telephone.

### **RISKS**

The questions I will ask you will not have touchy or sensitive issues. However, you are encouraged to discuss with myself or the principal investigator any negative or difficult feelings or experiences you will have as a result of participating in this research study. If at any time you feel you would like to stop your participation in the study, you will be free to do so.

### **COSTS AND FINANCIAL RISKS**

There are no financial costs directly associated with participation in the project, and participation voluntary.

### **BENEFITS**

There is no guarantee that you will benefit directly from the study. However, the findings of the research will be used in the development of a guideline for promotion of exclusive breastfeeding in Ethiopia. In addition, the research finding will help health professionals and health authority to refocus breastfeeding promotion strategies and interventions.

### **COMPENSATION**

You will not receive any compensation for participating in this study.

### **ALTERNATIVES**

Participation in this research project is entirely voluntary and you may choose not to participate.

### **CONFIDENTIALITY**

Every attempt will be made by the investigators to keep all information collected in this study directly confidential. If any publication results from this research, you will not be identified by name. I am using your name only for be able to following you up during the data collection processes.

### **ADDITIONAL INFORMATION**

Your participation in this study in entirely voluntary and you are free to refuse participation. You may discontinue your participation at any time without prejudice or without jeopardizing the future care of either of yourself or of your family members in this and other health facilities. If you discontinue participation in the

project, you may request that we may not use the information already given us. You are encouraged to ask questions concerning the study at any time as they occur to you during the study.

**DISCLAIMER/WITHDRAWAL**

You agree that your participation in this study is completely voluntary and that you may withdraw at any time without prejudicing your studying within the University of South Africa.

**PARTICIPANT RIGHT**

If you have any question pertaining to your participation in this study, you may contact the principal investigator Anteneh Girma Minas by telephone 0911316124.

**CONCLUSION**

By signing below, you are indicating that you have read and understood the consent form and that you agree to participate in this research study.

\_\_\_\_\_  
Participant's Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Interviewer's Signature

\_\_\_\_\_  
Date

## ANNEXURE 5: ETHICAL CLEARANCE



**UNIVERSITY OF SOUTH AFRICA  
Health Studies Higher Degrees Committee  
College of Human Sciences  
ETHICAL CLEARANCE CERTIFICATE**

**HS HDC/213/2013**

Date: 15 October 2013 Student No: 5432-830-7  
Project Title: Social-cognitive strategies to promote exclusive breastfeeding practices among primiparous mothers in Ethiopia.  
Researcher: Anteneh Ginna Minas  
Degree: D Litt et Phil Code: DPCHS04  
Supervisor: Dr M Ganga-Llizando  
Qualification: PhD  
Joint Supervisor: -

**DECISION OF COMMITTEE**

Approved

Conditionally Approved

**Prof L Roets  
CHAIRPERSON: HEALTH STUDIES HIGHER DEGREES COMMITTEE**

**Prof MM Molake  
ACADEMIC CHAIRPERSON: DEPARTMENT OF HEALTH STUDIES**

PLEASE QUOTE THE PROJECT NUMBER IN ALL ENQUIRES



## ANNEXURE 6: LETTER OF PERMISSION

University of South Africa  
Anteneh Girma Minas  
Department of health Studies,  
Telephone: 00251-911-316124,  
E-mail: [53428307@mylife.unisa.ac.za](mailto:53428307@mylife.unisa.ac.za) or [agirma2005@gmail.com](mailto:agirma2005@gmail.com)

To: Director of Gandhi Memorial Hospital, Addis Ababa

Dear Director

### **PERMISSION TO ACCESS ANC REGISTER**

I am a Doctoral student at the Department of Health Studies, University of South Africa (UNISA). I am conducting a research entitled: Social cognitive strategies to promote exclusive breastfeeding among primiparous mothers in Ethiopia. This study is part of the requirement for my degree. The purpose of the study is to propose strategies for promoting exclusive breastfeeding among primiparous mothers. The study will involve identifying and interviewing primiparous mothers attending antenatal care visit at this hospital.

I kindly request your permission to allow me to access the antenatal register in order to identify the potential respondents. I will arrange the interview with the respondents at the time and place more convenient to them. I would like to ensure you that this process will not disrupt the routine activities of the unit and that all information will be treated with confidentiality. This study received ethical clearance from the University of South Africa.

Please find attached the following substantiating documents for your consideration:

- (1) Summary of the accepted proposal
- (2) The Ethical Clearance Certificate issued by the University of South Africa
- (3) Questionnaire

Yours faithfully