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The estimated reduction of infant mortality by promoting exclusive breastfeeding has also been reported. Jones et al. (2003) reported in their study that there is an estimated 13% reduction in mortality by promoting exclusive breastfeeding. Data on exclusive breastfeeding up to sixth months is however scarce. A study conducted in Colombo in 2003 reported that none of the study subjects were practicing exclusive breastfeeding up to sixth months (Bunduseena, 2003).

### **Infant and young child feeding and HIV/AIDS**

Exclusive breastfeeding is recommended for HIV-infected mothers who breastfeed because it protects against diarrhea and other infections (Ahmed et al, 1992; Brown et al, 1989). In addition, when compared with mixed feeding, exclusive breastfeeding was associated with reduced risk of HIV transmission in a study in South Africa (Coutsoudis et al, 1999) and with increased HIV-free survival in a study in Zimbabwe (Liff et al, 2005). In the latter study, early mixed feeding was associated with a 4-fold increased risk of breastfeeding-associated HIV transmission at 6 months (Liff et al, 2005) Several explanations for the increased risk of HIV transmission associated with early mixed feeding have been proposed, including increased gut inflammation and permeability to infection, higher viral load in breast

milk, and more frequent breast health problems among mothers who mixed feed, but the causal mechanisms have not yet been identified (Kourtis et al, 2003).

## **5. OPERATIONAL DEFINITIONS / DEFINITION OF KEY TERMS**

### **5.1 Exclusive breastfeeding**

Giving the infant breast milk as the only source of nutrition with no other fluid or solids except vitamin/minerals drops, and medicines (WHO, UNICEF & BASICS, 1999)

**5.2 Mixed feeding:** Giving the baby some other food like porridge or other milk apart from breast milk. This is also referred to as partial feeding (WHO/UNICEF, 2002)

**5.3 BFHI:** Baby Friendly Hospital Initiative *of the*

**5.4 BFHI facility:** A facility that practices the ten UNICEF/WHO recommended steps to successful breast feeding. The ten steps to successful breastfeeding are:

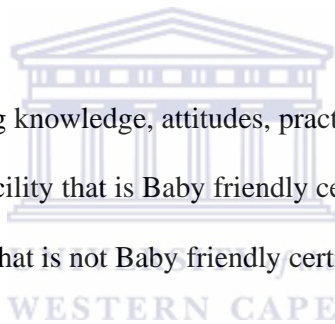
1. Have a written breastfeeding policy that is routinely communicated to all health care staff.
2. Train all health care staff in skills necessary to implement this policy.
3. Inform all pregnant women about the benefits and management of breastfeeding.
4. Help mothers initiate breastfeeding within a half-hour of birth.
5. Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.
6. Give newborn infants no food and drink other than breast milk, unless medically indicated.
7. Practise rooming-in. Allow mothers and infants to remain together - 24 hours a day.

8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic.

**5.5 Non BFHI facility:** A facility where the BFHI program is not being implemented.

## **6. AIM**

To assess infant feeding knowledge, attitudes, practices and beliefs among mothers who access a Health Facility that is Baby friendly certified compared to women who access a health facility that is not Baby friendly certified.



## **7. SPECIFIC OBJECTIVES**

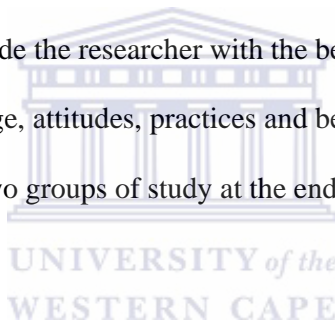
- To determine the current knowledge about infant feeding of mothers who gave birth at BFHI and non-BFHI health facilities.
- To determine the current attitudes about infant feeding of mothers who gave birth at BFHI and non-BFHI health facilities.
- To determine the current practices about infant feeding of mothers who gave birth at BFHI and non-BFHI health facilities.
- To determine the current beliefs about infant feeding of mothers who gave birth at BFHI and non-BFHI health facilities.

- To compare the knowledge, attitudes, practices and beliefs regarding infant feeding of mothers who gave birth at BFHI and non-BFHI health facilities.

## **8. METHODOLOGY**

### **8.1 Study design**

A cohort or follow up study of women and their infants 0-6 months attending BFHI and non BFHI health facilities in Blantyre district of Malawi will be conducted. The study method will provide the researcher with the best information as to whether the infant feeding knowledge, attitudes, practices and beliefs are shaped by the BFHI program or not in the two groups of study at the end of 6 months follow-up period.



### **8.2 Sampling**

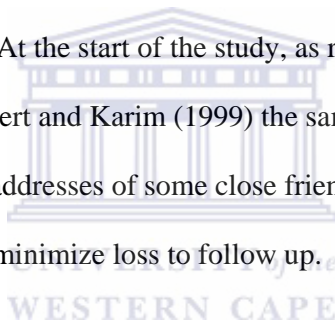
In this research, the study population is mothers and their infants from one semi-urban BFHI health facility and mothers and their infants from five (5) other semi-urban non-BFHI facilities. The BFHI facility has an average attendance rate of 120 mothers with 0-6 month old babies per month while the non-BFHI facilities have an average attendance of about 70 mothers with 0-6 months babies each. It is expected therefore that the potential number of respondents per facility will be sufficient to provide the intended sample for this study.

### **8.3 Sample**

The baseline study will be conducted among 200 mothers of infants within the first week of birth. A hundred mothers will be selected (convenient sample) from prima gravida mothers attending the under five clinic at a BFHI facility and a 100 prima gravida mothers attending the five non-BFHI under five clinics - within a week after giving birth . This sample will be used for the descriptive component of the study.

From the 200 mothers, 30 from the BFHI and 30 from the non-BFHI facility(s) will be selected randomly as the sample for follow-up on infant feeding practices at 3 and 6 months respectively. At the start of the study, as recommended by

Katzenellenbogen, Joubert and Karim (1999) the sampled mothers will be asked to provide the names and addresses of some close friends and relatives through whom they could be traced to minimize loss to follow up.



#### **Exclusion criteria for the sample will be:**

- Mother younger than 18 years old or older than 30 years
- Twins or multiple births
- Mothers who have received any formal training in nutrition

To limit confounding characteristics like employment status and marriage system (Matrilineal or Patrilineal which are the two systems of marriage in Malawi and have an influence on feeding practices), the randomly selected sample will be paired for these characteristics.

#### **8.4 Data collection**

Data will be collected using a structured questionnaire that will be completed during an interview. All interviews will be conducted by the researcher and a trained research assistant. The areas that will be covered in the questionnaire will include knowledge, attitudes and beliefs regarding current infant feeding practices, knowledge on benefits of breastfeeding and source of antenatal and postnatal information, influence to give infant something other than breast milk, mothers' main source of infant care support, and availability of resources that could influence infant feeding practices.

The researcher will collect data from the non- BFHI facilities while the research assistant will collect data from the BFHI facility. This arrangement will be done to minimize bias as the researcher coordinates the BFHI program and provide training-of-trainers and supportive supervision at the BFHI facility. Mothers might therefore recognize her and provide answers which they might expect she wants to hear. The research assistant will be someone who has never received any formal training in BFHI. Training for data collection will include a comprehensive discussion of the research objectives, selection of study participants, and administration of the questionnaire with an emphasis on probing and research implementation plan.

Respondents for the baseline (descriptive component of this study) will be selected and interviewed as they wait to be seen by a health worker at the under five clinic as well as those that have just delivered in the post natal wards before they are discharged from the facility. Interviews will be done in arranged consultation rooms

or any other secluded area away from the other mothers or health workers. On average, the interview will take 20-30 minutes. Open ended questions informed by literature on the topic will be used to collect data during which probing will be done to get clarity and further explanation on the knowledge, attitudes and practices in infant feeding. Notes will be taken by the researcher and the research assistant respectively.

### **8.5 Reliability and data validity**

Reliability will be ensured by training the research assistant, pilot testing the questionnaire, providing the research assistant with clear instructions, posing the question clearly and unambiguously in the local language (Chichewa), cross-checking some of the reported information in the infants' child health passport and by ensuring that numerous items in the questionnaire are measuring the same item/idea. The researcher is an infant feeding/BFHI trainer and therefore an expert in the field. She will therefore ensure data appropriateness and coverage especially in terms of content.

### **8.6 Data analysis**

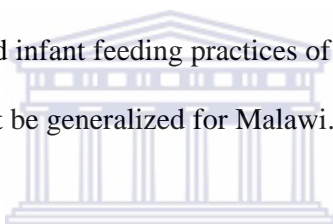
Data analysis has been defined by Marshall & Rossman (1995) as a procedure of categorizing, structuring and putting meaning to the mass of collected data. For this study all data generated by this study will be analyzed using an Epi Info public computer application for epidemiological analysis. Frequencies will be tallied for categorical variables and mean standard deviations will be computed for continuous variables.

To determine the differences between BFHI and non-BFHI facility groups for all relevant variables, Chi-square with health facility type as classification variable will be computed for categorical variables and the independent samples t-test for continuous variables.

### **9. Limitations**

The following limitations are noted:

The sample will be collected from one district and will not necessarily reflect the knowledge, attitudes and infant feeding practices of mothers in other districts. The results will therefore not be generalized for Malawi.



### **10. Ethical consideration**

Approval will be sought from the Higher Degrees Committee of the University of the Western Cape before commencing the study. The purpose and process of the study will be explained to all possible study participants where after their participation will be requested assuring them of confidentiality (See Appendix A: Information sheet). The researcher will inform the respondents about the study and provide them with necessary details and ask them if they are willing to participate in the research process. Written consent will be obtained from possible participants/candidates/mothers that are willing to participate. (See Appendix B: Informed consent). All participants will be assured of their right to participate or decline or indeed withdraw from the study at any time should they feel uncomfortable. Participants will be assured of anonymity and confidentiality of their



participation in the study at all times. Given the nature of the research, it is most unlikely that the respondents will perceive the research as threatening. It is anticipated that the research will cause no harm to the respondents. However, a member from the infant feeding community support group will be on hand at any stage incase any respondent becomes upset during the research process.



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