Effect of Community Infant and Young Child Feeding Counseling on Infant Feeding Knowledge, Attitudes and Practices in Harare City 2013

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Declaration

I, Faith Kamusono, certify that this dissertation is my original work and has been
prepared in accordance with the guidelines of the Master of Public Health Program
University of Zimbabwe. I further attest that this work has not been submitted, in part or
in full, for any other degree at any university and/or any publication.
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I, having supervised and read this dissertation, I am satisfied that this is the original work
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ABSTRACT

Effect of Community Infant and Young Child Feeding Counseling on Infant Feeding Knowledge, Attitudes and Practices in Harare City 2013

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Background

A preliminary review of nutrition reports for Harare City revealed that set targets for exclusive breastfeeding rate, timely initiation of breastfeeding, median duration of breastfeeding and stunting were not met. All these are a consequence of poor infant feeding knowledge, attitudes and practices on the child. This study aims to find out the effect of community infant and young child feeding counseling on maternal knowledge attitudes and practices on optimal infant feeding in Harare City.

Methodology

A prospective cohort study was conducted in Harare City on pregnant and lactating women. The exposure was receiving counseling in community infant and young child feeding. Interviewer administered questionnaires, key informant interviews, focus group discussions and record reviews were used to collect data.

Results

Mothers who received counseling in community infant and young child feeding had better knowledge on optimal infant and young child feeding at endpoint (mean knowledge score = 7.8, SD = 1.36) compared to the unexposed group (mean knowledge score = 5.4, SD = 1.53) and this was statistically significant (p = 0.005). Community infant and young child feeding counseling had an effect on timely initiation of breastfeeding, giving water, exclusive breastfeeding and giving solids. Most of the respondents, 92% in the exposed group had a positive attitude towards optimal infant and young child feeding practices as compared to the non-exposed group.

Conclusion

Community infant and young child feeding counseling has an effect on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City, 2013.

Key Words

Infant, exclusive, breastfeeding, exposed, unexposed, base-line, end-point, knowledge, attitudes, practices

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TABLE OF CONTENTS

Declaration	i
ABSTRACTii	i
ACKNOWLEDGEMENTSiv	7
List of figuresvii	i
List of Tablesviii	i
ABBREVIATIONSx	ζ.
CHAPTER 11	L
INTRODUCTION 1	L
2.1 Background Information	L
1.2 Statement of the Problem	5
1.3 Research Question6	5
1.4 Justification6	5
CHAPTER 27	7
LITERATURE REVIEW7	7
2.1 Public Health Significance	7
2.2 Literature review	7
CHAPTER 3	2
OBJECTIVES AND HYPOTHESES12	2
3.1 Broad Objective	2
3.2 Specific objectives	2
3.3 The hypothesis	3

CHAPTER 4	14
METHODS AND MATERIALS	14
4.1 Introduction	14
4.2 Study Design	14
4.3 Study setting	14
4.4 Study Population	14
4.5 Sample size	14
4.6 Sampling plan	15
4.7 Data collection techniques and instruments	15
4.8 Follow up plan	16
4.9 Inclusion and Exclusion Criteria	17
4.10 Measurement of variables	18
4.11 Methodology for Qualitative Data Collection	19
4.12 Permission to proceed and Ethical considerations	20
4.13 Data collection and Data analysis	21
4.14 Study Limitations	21
CHAPTER 5	23
RESULTS	23
CHAPTER 6	40
DISCUSSION	40
CHAPTER 7	45
CONCLUSIONS AND RECOMMENDATIONS	45
References	47

Appendices
Appendix 1: English Questionnaire
Appendix 2: Shona Questionnaire
Appendix 3: Key Informant Interview Guide
Appendix 4: Focus Group Discussion Guide
Appendix 5: English Consent Form
Appendix 6: Shona Consent Form
Appendix 7: Records Review
Appendix 8: JREC Approval Letter
Appendix 9: MRCZ Approval Letter
List of figures
Figure 1: Conceptual framework for determinants of Infant and Young Child Feeding
Practices
Figure 2: Follow up plan

List of Tables

Table 1: Demographic characteristics of the exposed group and unexposed group at
baseline
Table 2: Maternal Age and Parity amongst the Exposed and Unexposed groups at
baseline
Table 3a: Knowledge score of optimal IYCF amongst the Exposed and Unexposed
groups at baseline
Table 4: Knowledge score of optimal IYCF amongst the Exposed and Unexposed groups
at endpoint
Table 5: Knowledge among the exposed and unexposed groups on optimal infant and
young child feeding practices at baseline
Table 6: Knowledge among the exposed and unexposed groups on optimal infant and
young child feeding practices at endpoint
Table 7: IYCF practices among the exposed and unexposed groups at baseline 29
Table 8: IYCF practices among the exposed and unexposed groups at endpoint 30
Table 9: Logistic Regression for Practices Independently Associated with community
Infant and Young Child Feeding Counseling in Harare City, 2013
Table 10: Attitudes among the exposed and unexposed groups towards exclusive
breastfeeding at baseline
Table 11: Attitudes among the exposed and unexposed groups towards exclusive
breastfeeding at endpoint
Table 12: Attitudes among the exposed and unexposed groups towards exclusive
breastfeeding at baseline

Table 13: Attitudes among the exposed and unexposed groups towards exclusive	
breastfeeding at endpoint	36
Table 14: Program Indicators at endpoint	38
Table 15: Thematic analysis of qualitative data	39

ABBREVIATIONS

ANC Antenatal care

CDC Center for Disease Control

cIYCF Community Infant and Young Child Feeding

DHS Director of Health Services

EBF Exclusive Breastfeeding

EDD Expected date of Delivery

FCH Family Child Health

FGD Focus Group Discussion

HIV Human Immunodeficiency Virus

HP Health promoters

HSO Health Studies Office

JREC Joint Research Ethics Committe

MOH &CW Ministry of Health & Child Welfare

MPH Masters' in Public Health

MRCZ Medical Research Council of Zimbabwe

WHO World Health Organization

 χ^2 Chi-square

ZDHS Zimbabwe Demographic Health Survey

CHAPTER 1

INTRODUCTION

2.1 Background Information

Adequate nutrition is essential for children's health and development. Globally it is estimated that under nutrition is responsible, directly or indirectly, for at least 35% of deaths in children less than five years of age. Under nutrition is a major cause of disability which prevents surviving children to reach their full development potential¹. It is estimated that 32% or 186 million children who are five years and below are stunted and about 10%, or 55 million, are wasted in developing countries. Unless massive improvements in child nutrition are made, it will be difficult to achieve Millennium Development Goal number four: To reduce child morbidity and mortality by two thirds by 2015¹.

Zimbabwe is not on target for achieving both MDG 1 (underweight) and Target 4 (<5mortality). It is estimated that 12, 000 (preventable) child deaths per year are attributable to under nutrition in Zimbabwe. Nationally, stunting (chronic malnutrition) is at 33.3%, and between 20-29.9% in Harare City. In Zimbabwe, the national exclusive breastfeeding rate is at 5.8%².

It is a global priority that breastfeeding be promoted and supported. Breastfeeding promotion and support is also an important child-survival intervention. Although exclusive breastfeeding is being advocated for, most of the mothers are unable to practice

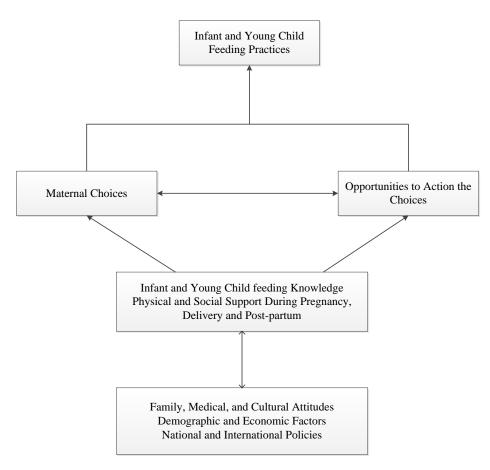
it in reality³. The most common reasons for early discontinuation of breastfeeding include lack of confidence in mothers' ability to breastfeed, difficulties in infant latching and suckling, pain in the breast and soreness of the breast, perceptions that the milk is not enough and lack of individualized support and encouragement from health workers in early post discharge period. These problems can be overcome if the woman is informed about the benefits of breastfeeding during her antenatal visits and thus, she can be prepared mentally for exclusive breastfeeding^{3, 4}.

Early breastfeeding practices determine the successful establishment and duration of breastfeeding. Moreover, during the first three days after delivery, colostrum, an important source of nutrition and protection for the newborn, is produced and should be given to the newborn while awaiting the letdown of regular breast milk. Thus, it is recommended that children be put to the breast immediately or within one hour after birth and that prelacteal feeding (feeding newborns anything other than breast milk before breast milk is regularly given) be discouraged. The Ministry of Health and Child Welfare promotes rooming-in of all new infants in maternity hospitals and breastfeeding within the first hour of birth to foster bonding and protect children from harsh external environments⁵.

In Harare City, there is a total of 230 health promoters distributed over the districts. They play a crucial role in health education and promotion covering areas of nutrition, environmental health, home based care and counseling in issues to do with health. Their role is to give health education to the community, identify cases which need referral to

the clinic, give breastfeeding counseling, encourage caregivers to go with their children for immunizations and growth monitoring among others. In nutrition, their role is to give nutrition education to the community, to identify cases which need referral to the hospital and to follow up the cases.

Figure 1: Conceptual framework for determinants of Infant and Young Child Feeding Practices



The community IYCF counseling package is a generic resource designed to equip community workers (CWs) or primary health care staff to support mothers, fathers and

other caregivers to optimally feed their infants and young children. The training component of the package is intended to prepare community workers with technical knowledge on the recommended breastfeeding and complementary feeding practices for children from 0 up to 24 months, enhance their counseling, problem solving and reaching-an-agreement, that is, negotiation skills and prepare them to effectively use the related counseling tools and job aids⁶.

Community infant and young child feeding counseling aims to raise the counselors' awareness on the importance of optimal breastfeeding and complementary feeding for children 0–23 months, contact points for meeting with caregivers to discuss and support optimal infant and young child feeding practices⁶. It also aims to increase knowledge amongst the counselors so as to enable them to help mothers and caregivers to optimally feed their infants and young children less than two years of age. It also enhances the skills of the counselors to support caregivers. These skills include listening and learning, building the mother's or caregiver's confidence, providing support and practical help and negotiating if modification of a behaviour is needed. Describing practices and messages on feeding of the sick child less than six months and greater than six months of age is also enhanced by the community infant and young child feeding package⁶.

The knowledge, attitudes and practices of the caregiver towards optimal infant and young child feeding play a major role. It is to the interest of public health that the problem is addressed. This study therefore seeks to assess whether community infant and young child feeding counseling has an effect on optimal infant and young child feeding. If it

proves to have an effect in our own setting, then it can be cascaded to all communities to help achieve the goal towards reducing child morbidity and mortality.

1.2 Statement of the Problem

A preliminary review of nutrition reports revealed that there are poor practices on infant and young child feeding by mothers in Harare City. The exclusive breastfeeding rate was at 5.8%, against the national target of 70%. Timely initiation of breastfeeding was at 61.9% against the national target of 75%, the median duration of breastfeeding was at 17 months against the national target of 24 months and the prevalence of stunting was between 20-29.9% against a target of below 2.3%⁵ for the period January to December 2011. Young children are generally not being provided with adequate complementary foods in terms of frequency and diversity. All these are a consequence of poor infant feeding knowledge, attitudes and practices on the child. Mothers seem not to be utilizing the health education that they are given during routine family and child health talks. The community infant and young child feeding program uses a one on one approach method and there is individual follow up from pregnancy through lactation, complementary feeding and weaning. Counselors are conducting the program through home visits and there is high loss to follow up of the mothers. It is against this background that we set to find out whether community infant and young child feeding counseling has an effect on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City, 2013.

1.3 Research Question

Does community infant and young child feeding counseling have an effect on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City, 2013?

1.4 Justification

The community infant and young child feeding counseling program has worked in other countries such as India and Malawi. In Zimbabwe, it was piloted in Gokwe and no evaluation was done to assess whether it works in our own setting or not. It was then cascaded to other districts including Harare City and no baseline study was done. This study therefore seeks to assess whether the community infant and young child feeding program works in our own setting.

CHAPTER 2

LITERATURE REVIEW

2.1 Public Health Significance

Malnutrition is a matter of public health concern. If not addressed it will lead to child morbidity and mortality which millennium development Goal number 4 "Reduce child morbidity and mortality by two-thirds" is seeking to address. This study seeks to find out if community infant and young child feeding can help alleviate this problem in our own setting. One in every three children in Zimbabwe has chronic malnutrition. If this is not addressed during the "window of opportunity", that is, during pregnancy and during the first two years of life, it may become irreversible. Chronic malnutrition (stunting) can result in poor mental development and reduced performance in school in children, who are the future for tomorrow. This is a consequence of poor optimal infant and young child feeding practices.

2.2 Literature review

The World Health Organization recommends timely initiation of breastfeeding, that is, within one hour of giving birth. Instead of putting the new born baby in its own coat bed, rooming-in is now encouraged, where the mother and the baby sleep together and share the same bed. This encourages bonding between the mother and the baby and it also helps to keep the baby warm. As soon as the mother gives birth, she is encouraged to put the

baby onto the breast and start to breastfeed. She is also given support on good positioning and attachment of the baby during breastfeeding to encourage proper suckling. At hospital this is done by the nurses and in the community, the infant feeding counselors, in our case, the health promoters help support the mother on proper positioning and attachment of the baby during breastfeeding.

Lauer JA and Betran AP in their study, "Deaths and years of life lost due to suboptimal breast-feeding among children in the developing world: a global ecological risk assessment" reported that globally, it is estimated that over one million of newborn infant lives could be saved each year by initiating breastfeeding within the first hour of life. In developing countries alone, early initiation of breastfeeding was reported to save as many as 1.45 million lives each year by reducing deaths mainly due to diarrheal disorders and lower respiratory tract infections in children.

A recent trial by Edmond KM, etal entitled, "Delayed breastfeeding initiation increases risk of neonatal mortality" revealed that timely initiation of breastfeeding for the newborns within the first hour of life could reduce neonatal mortality by 22% , which would contribute to the achievement of the Millennium Development Goals.

In a randomized controlled trial by the International Centre for Diarrhoeal Disease

Research in Dhaka, Bangladesh, they found that peer counselors can effectively increase

both the timely initiation of breastfeeding within the first hour of life and the duration of

exclusive breastfeeding for the first six months of life⁹. They recommended incorporation

of peer counselors in mother and child health programs in developing countries⁹. On top of timely initiation of breastfeeding within the first hour of life and exclusive breastfeeding for the first six months of life, Zimbabwe also recommends continued breastfeeding for two years or more.

In a randomized controlled study which was done in Mexico, where they assessed the efficacy of home-based peer counseling to increase the proportion of exclusive breastfeeding among mothers and infants residing in peri urban Mexico City, they found that early and repeated contact with peer counselors was associated with a significant increase in exclusive breastfeeding and the duration of breastfeeding ¹⁰.

A study by Anderson A. K found that a well-structured and intensive breastfeeding support which was provided by hospital and community-based peer counselors was effective in improving exclusive breastfeeding rates among low-income, inner-city women in the United States¹¹. Although breastfeeding support and education were being provided by public health and other health care staff to pregnant and nursing mothers, breastfeeding incidence, duration, and exclusive breastfeeding rates still remained low among the low-income groups, which were over-represented by minority communities in the United States¹¹.

In a study which was done in Zimbabwe by Banda M, they found that peer nutrition education with combined routine infant feeding counseling was effective in improving maternal breastfeeding knowledge. The study showed that a peer nutrition education

program had a significant impact on breastfeeding knowledge and attitudes. The intervention and comparison groups were basically similar at baseline. Following the peer nutrition education program, the intervention group reported higher levels of knowledge and more positive attitudes than the comparison group. They concluded that peer counselors can effectively increase maternal breastfeeding knowledge. For one to be able to practice optimal infant and young child feeding practices, they ought to be knowledgeable on it in order to practice it.

In an effort to combat malnutrition in Zimbabwe, the Baby Friendly Hospital Initiative was launched in 1999. This was a twenty hour training which aimed at equipping health workers to support mothers to timely initiate breastfeeding in the first hour of life and optimally feed their children. The initiative included the ten steps towards successful breastfeeding 13 and these are: To have a written breastfeeding policy that is routinely communicated to all health care staff, train all health care staff in skills necessary to implement this policy, inform all pregnant women about the benefits and management of breastfeeding, help mothers initiate breastfeeding within the first hour of life, show mothers how to breastfeed and maintain lactation, even if they should be separated from their infants, give newborn infants no food or drink other than breast milk, unless medically indicated, practice rooming in, encourage breastfeeding on demand, give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants and to foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic 14.

The Infant and Young Child Feeding forty eight hour course was also initiated following the Baby Friendly Hospital Initiative. The aim was to equip health workers the knowledge and skills to help mothers optimally feed their children. The objective was to protect, promote and support breastfeeding, exclusively for six months and continued breastfeeding for two years or beyond. A community focused approach, the community infant and young child feeding was then initiated to ensure a continuum of care from the health facility to the community.

Various factors affect optimal infant and young child feeding. These include maternal choices and opportunity to action the choices. Optimal infant and young child feeding practices is also affected by the caregivers' infant and child feeding knowledge, physical and social support during pregnancy, delivery and post-partum. The caregivers ought to have the knowledge on optimal infant and young child feeding practices in order to optimally utilize them.

Socio-demographic factors also affect effect of the community infant and young child feeding program. Cultural attitudes, family, medical, national and international policies also have an effect on the performance of the program. Health service related factors such as anti-natal attendance also affect access to health education.

CHAPTER 3

OBJECTIVES AND HYPOTHESES

3.1 Broad Objective

To determine the effect of community IYCF counseling program on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City, 2013.

3.2 Specific objectives

- To compare the knowledge, attitudes and practices on optimal infant and young child feeding among mothers who have received counseling in community infant and young child feeding and those that have not.
- To compare timely initiation of breastfeeding within the first hour of life among mothers who have received counseling in community infant and young child feeding and those that have not.
- 3. To compare proportion of new borns given supplementary feeds from birth to the time of the second interview among mothers who have received counseling in community infant and young child feeding and those that have not.

3.3 The hypothesis

Community infant and young child feeding counseling has an effect on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City, 2013.

CHAPTER 4

METHODS AND MATERIALS

4.1 Introduction

This chapter covers our materials and methods.

4.2 Study Design

A before and after study was conducted.

The exposure was receiving counseling in community infant and young child feeding

4.3 Study setting

Harare City Health Department, Clinics and their catchment areas

4.4 Study Population

Pregnant and lactating women, health promoters/counselors, nutritionists, health promoter coordinators

4.5 Sample size

Using stat calc in epi-info, at 95% confidence level and 80% power, using a study by

Banda M etal, 'The Effect of a Peer Nutrition Education Programme on Maternal

Knowledge on Breastfeeding in Mazowe and Bindura Districts' where they found out
that 56.1% in the control group had the knowledge on risks of not exclusive breastfeeding

and 81.2% in the intervention group had the knowledge. The minimum sample size calculated was 120 women.

4.6 Sampling plan

Women coming for their antenatal visits meeting the inclusion criteria were consecutively recruited into the study. Harare City is divided into eight districts. One district was randomly selected to receive the counseling, this was the Northern district. Another district was randomly selected not to receive the counseling; this was the North Western district. Of the five suburbs in the Northern district, one was randomly selected to receive the counseling, Hatcliff suburb and of the seven suburbs in the North Western district, one was randomly selected not to receive the counseling, Marlborough suburb.

4.7 Data collection techniques and instruments

Interviewer administered questionnaires were used to collect data on optimal infant and young child feeding knowledge, attitude and practices from mothers.

Key informant interviews were conducted using a key informant guide to find challenges and how best the program could be improved.

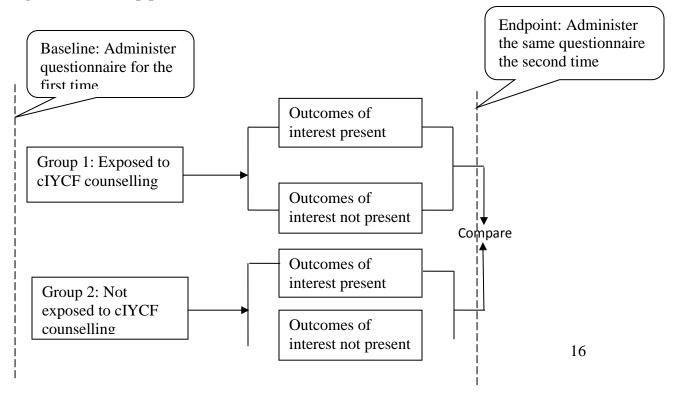
Two Focus group discussions were conducted with health promoters to find community attitudes and practices towards optimal infant and young child feeding.

Seven Health Promoter registers were reviewed to assess data quality (completeness of registers, timeliness of reporting and accuracy)

4.8 Follow up plan

Baseline data was collected using an interviewer administered questionnaire to both groups before the follow up. The follow up period was eight weeks. Each mother received four visits. Follow ups were done after every two weeks, that is, following the first visit, the mother received the second visit after two weeks. All mothers were recruited when they were pregnant. Baseline information was collected before the first visit and endpoint information was collected after delivery which was after the fourth visit. The counselors followed up the mothers through home visits. The questionnaire that was used at baseline was the same questionnaire that was used at endpoint (after delivery, regardless of the child's age, that is, eight weeks and above)-at the end of the study. In Harare city, the counseling program is practiced in high density and medium density suburbs of the city.

Figure 2: Follow up plan



A questionnaire was administered at baseline to both groups. The 1st group consisted of mothers who were exposed to counselling on community IYCF and the 2nd group consisted of mothers who were not exposed to counselling on community IYCF. After the baseline, the 1st group received counselling on community IYCF and the 2nd group did not receive counselling on community IYCF.

The selection of the women in both groups took place at the same time. The follow up period was eight weeks. These follow ups were done through home visits by the counsellors. Four sessions were done through the 8 weeks and the interval between one session and the next was two weeks. Counselling cards were discussed in these sessions. After the eight weeks, the same questionnaire was administered to both groups. The outcomes from both groups were compared.

4.9 Inclusion and Exclusion Criteria

4.9.1 Inclusion Criteria

A woman 32 weeks pregnant resident in Harare City from December 2012 to September 2013 and had not received counseling on community infant and young child feeding.

4.9.2 Exclusion Criteria

Women who reside out of Harare City who had received counseling on community infant and young child feeding.

4.10 Measurement of variables

4.10.1 Knowledge – The knowledge of the optimal infant and young child feeding practices was measured by correct answers to define exclusive breast feeding, mentioning benefits of exclusive breastfeeding, duration of exclusive breastfeeding, correct age of introduction of water, introduction of solids, correct age of weaning, feeding of the sick child, benefits of iron antenatal, and importance of complementary feeding. Multiple choice questions were used. Collected data was reviewed.

4.10.2 Attitudes

Mothers' attitudes were assessed using a seven point likert scale comprising of strongly agree = +2 /agree = +1 /neutral = 0 /disagree = -1 /strongly disagree = -2 to the following questions:

- Breast milk is not enough for the baby in the first six months of life
- If a baby cries a lot it means it is hungry and needs other food
- Giving cooking oil in the first six months of life helps the baby
- A baby needs water (even sips) in the first six months of life
- Mothers who are HIV positive should breastfeed their babies
- Breastfeeding can make a woman feel important
- Breastfeeding can stop mothers form doing their household chores
- Breastfeeding is embarrassing
- Exclusive Breastfeeding is a difficult way to feed infants
- It is ok to breastfeed in public

A seven point likert scale was used to assess attitudes

4.10.3 Early Initiation of Breast milk

This was measured by assessing whether breastfeeding was initiated within the first hour of life among all mothers.

4.10.4 Early introduction of solids and/water

This was measured by assessing whether water or solids were introduced from birth to the time of the second interview among all mothers.

4.10.5 Breastfeeding support groups

This was measured by assessing whether a mother had attended breastfeeding support groups among all mothers.

4.10.6 HIV testing

History of HIV testing was taken by the time of enrollment and by the second interview among all mothers.

4.11 Methodology for Qualitative Data Collection

Focus group discussions of six women(counselors) using a focus group discussion guide were conducted. They ranged from one to one and a half hours. In-depth interviews with key informants(nutritionist, health promotion officer, health promotion co-ordinator, sister in charge) were also conducted. Data was collected through a recorder by hand on

paper transcripts using coloured pens. Field notes were also used. A homogeneous group of health promoters was purposively sampled into the study. The data was analyzed using thematic analysis and coding.

4.12 Permission to proceed and Ethical considerations

4.12.1 Permission to proceed

Permission to conduct the study was sought from the Health Studies Office and from the Harare City Health Director of Health Services.

4.12.2 Ethical considerations

- Informed written consent was sought from all persons interviewed during the study. Participants were free to refuse to participate without any consequences arising from their refusal.
- 2. Confidentiality of responses was assured and maintained. All data collected was treated confidential.
- Ethical approval was sought from Medical Research Council of Zimbabwe
 (MRCZ) and Joint Research Ethics Committee (JREC)
- 4. The researchers took necessary measures to avoid disrupting the daily patient care activities through making appointments.
- 5. Completed questionnaires were kept under lock and key.

6. The other pregnant women received routine health education from health facilities.

4.13 Data collection and Data analysis

4.13.1 Data collection

All participating health facilities were notified prior to the visit and an introductory letter was carried by the researcher. In case of refusal to participate by the selected respondent, another was selected. At baseline, data was collected at health facilities where the mothers were coming in for their antenatal visits. At endpoint, data was collected through home visits.

4.13.2 Data analysis

Quantitative data was captured and analyzed using the Epi-info statistical package.

Microsoft excel was used to generate graphs.

Qualitative data was put into Microsoft office word and analyzed by theme

4.14 Study Limitations

Reported information from the mother was relied upon. It was not possible to verify the infant feeding practices that they were practicing at their homes.

Since the information at baseline was assessed based on the previous experiences, there was a possibility of recall bias since some caregivers had to recall their experiences which happened years back. And the records that they had did not have information on

how long they exclusively breastfed, how early they initiated breastfeeding, when they weaned their children and when they introduced water and solids.

There is also a possibility that those who were exposed to community infant and young child feeding counseling could report ideal practices at endpoint interview which they may not be really practicing since they now knew what should be done basing on the knowledge they acquired from the counseling sessions.

CHAPTER 5

RESULTS

Table 1: Demographic characteristics of the exposed group and unexposed group at baseline

Variable	Frequency n (%)			
	Exposed	Unexposed	χ^2 p-value	
Education Status				
Primary	3 (3)	4(3)	0.124	
Secondary	55(46)	47(39)		
Tertiary	2(2)	9(8)		
Marital Status				
Married	56 (47)	59(49)	0.176	
Divorced/Separated	0	0		
Widowed	0	1 (1)		
Single	2 (2)	0		
Cohabiting	2 (2)	0		
Source of Income				
Formal employment	5 (4)	6(5)	0.545	
Informal employment	7(6)	4(3)		
Housewife	47(39)	50(42)		
Religion				
Apostolic	14(12)	14 (17)	0.584	
Non-apostolic	46(38)	45(38)		
None	0(0)	1(1)		

There were no statistically significant differences in demographic profile between the exposed and unexposed groups. The groups were comparable.

Table 2: Maternal Age and Parity amongst the Exposed and Unexposed groups at baseline

Variable		Frequency n(%)		
	Exposed	Unexposed	χ^2 p-value	
Maternal Age				
<25	26 (22)	25 (21)	0.862	
25-34	31 (26)	33 (28)		
35-44	3 (3)	2 (2)		
Parity				
0	28 (23)	25 (21)	0.331	
1	17 (14)	25 (21)		
2+	15 (13)	10 (9)		

There were no statistically significant differences in maternal age and parity between the two groups. The groups were comparable. Feeding practices for parity zero mothers was only assessed after child birth.

Table 3: Knowledge among the exposed and unexposed groups on optimal infant and young child feeding practices at baseline

Variable		Baseline	
	Exposed	Unexposed	p-value
	n (%)	n (%)	
Correct definition of exclusive	23 (38)	25 (42)	0.710
breastfeeding			
Timely initiation of solids	49 (82)	48 (80)	0.820
Timely initiation of water	30 (50)	31 (52)	0.860
Correct duration of b/feeding	22 (37)	23 (38)	0.850
Benefits of iron supplementation	47 (78)	48 (80)	0.820
HIV + mothers can bear children	43 (72)	44 (73)	0.840
HIV + mothers can breastfeed	45 (75)	34 (57)	0.030
Benefits of EBF	38 (63)	27 (45)	0.190
Complementary feeding benefits	43 (72)	53 (88)	0.810
Timely initiation of b/feeding	14 (23)	12 (20)	0.280
First feed to be given to a baby	58 (97)	56 (93)	0.710
How to care for a sick child	52 (87)	59 (98)	0.100

At baseline, there were no statistically significant differences in terms of knowledge on optimal infant and young child feeding practices between the exposed and un-exposed groups. The groups were comparable.

Table 4: Knowledge among the exposed and unexposed groups on optimal infant and young child feeding practices at endpoint

Variable		Endpoint	
	Exposed	Unexposed	p-value
	n (%)	n (%)	
Correct definition of exclusive	54 (90)	20 (33)	< 0.001
breastfeeding			
Timely initiation of solids	60 (100)	53 (88)	0.006
Timely initiation of water	55 (92)	32 (53)	< 0.001
Optimal duration of	48 (80)	21 (35)	< 0.001
breastfeeding			
Benefits of iron supplementation	57 (95)	54 (90)	0.299
HIV + mothers can bear children	54 (90)	47 (78)	0.080
HIV + mothers can breastfeed	53 (88)	36 (60)	0.004
Benefits of EBF	54 (90)	16 (27)	< 0.001
Benefits of complementary	56 (93)	58 (97)	0.340
feeding			
Timely initiation of	52 (87)	11 (18)	< 0.001
breastfeeding			
First feed to be given to a baby	60 (100)	60 (100)	
How to care for a sick child	60 (100)	60 (100)	

At end point, there were statistically significant differences between the two groups on knowing the correct definition of exclusive breastfeeding, timely initiation of solids, timely initiation of water, optimal duration of breastfeeding, knowing that HIV positive mothers can breastfeed, benefits of exclusive breastfeeding and timely initiation of breastfeeding. All of the respondents knew the first feed to be given to a baby and how to care for a sick child in both groups.

Table 5: Knowledge score of optimal IYCF amongst the Exposed and Unexposed groups at baseline

Knowledge Score	Exposed	Unexposed	χ² p value
	n (%)	n (%)	
Good	09 (15)	06 (10)	0.569
Fair	44 (73)	44 (73)	
Poor	07 (12)	10 (17)	

In terms of knowledge on optimal infant and young child feeding, the mean knowledge scores at baseline were 6.1 (SD = 2.23) in the exposed group while in the unexposed group it was 5.7 (SD = 2.35), a non-significant statistical difference in knowledge levels between the two groups (p = 0.569).

When the responses on knowledge on optimal infant and young child feeding were aggregated and put on a likert scale of 1-10 where a score of 0-4 was poor, 5-7 was fair and 8-10 was good knowledge, there were no statically significant differences in terms of knowledge levels between the two groups at baseline [p-value = 0.569]. It is important to note that at baseline, the majority of the respondents (73%), had fair knowledge on optimal infant and young child feeding in both groups.

Table 6: Knowledge score of optimal IYCF amongst the Exposed and Unexposed groups at endpoint

Knowledge Score	Exposed	Unexposed	χ² Fisher's exact value
	n (%)	n (%)	
Good	37 (62)	2 (3)	< 0.001
Fair	23 (38)	46 (77)	
Poor		12 (20)	

In terms of knowledge on optimal infant and young child feeding, the mean knowledge scores at end-point were 7.8 (SD = 1.36) in the exposed group while in the unexposed group it was 5.4(SD = 1.53) with a value of (F-exact < 0.001), a statistically significant difference in knowledge levels between the two groups.

When the responses on knowledge on optimal infant and young child feeding were aggregated and put on a likert scale of 1-10 where a score of 0-4 was poor, 5-7 was fair and 8-10 was good knowledge, there was a statically significant difference in terms of knowledge levels between the two groups at endpoint [p-value = 0.0000]. It is important to note that at endpoint, the majority of the respondents (62%), had good knowledge on optimal infant and young child feeding in the exposed group whilst the majority of the respondents (77%) in the unexposed group had fair knowledge on optimal infant and young child feeding.

Table 3: IYCF practices among the exposed and unexposed groups at baseline

IYCF	IYCF	Relative Risk	95% CI	p- value	
Practice	Practice				
Present	Absent				
ר	Γimely initiation	n of breastfeeding			
20	12	1.56	0.96 - 2.54	0.066	
14	21				
	Givin	g solids			
14	18	1.31	0.80 - 2.14	0.273	
20	15				
	Givin	g water			
05	27	0.91	0.31 - 2.70	0.867	
06	29				
Attending a breastfeeding support group					
0	60				
0	60				
	Practice Present 20 14 14 20 05 06 Atte	Practice Practice Present Absent Timely initiation 20 12 14 14 21 Givin 14 20 15 Givin 05 05 27 06 29 Attending a breastfe 0 60	Practice Practice Present Absent Timely initiation of breastfeeding 20 12 1.56 14 21 Giving solids 14 18 1.31 20 15 Giving water 05 27 0.91 06 29 Attending a breastfeeding support gr 0 60	Practice Present Absent Timely initiation of breastfeeding 20 12 1.56 0.96 − 2.54 14 21 Giving solids 14 18 1.31 0.80 − 2.14 20 15 Giving water 05 27 0.91 0.31 − 2.70 06 29 Attending a breastfeeding support group 0 60	

At baseline, there were no statistically significant differences between the two groups in terms of their practices on optimal infant and young child feeding. The groups were comparable.

Table 4: IYCF practices among the exposed and unexposed groups at endpoint

cIYCF	IYCF	IYCF	Relative Risk	95% CI	p- value
Counseling	Practice	Practice			
Done	Present	Absent			
-					
		Timely initiatio	n of breastfeeding		
Yes	54	6	1.69	1.31 - 2.17	< 0.001
No	32	28			
		Givin	g solids		
Yes	2	58	0.18	0.04 - 0.79	0.008
No	11	49			
		Givin	ig water		
Yes	7	53	0.19	0.09 - 0.40	< 0.001
No	36	24			
		Exclusive	breastfeeding		
Yes	53	7	2.2	1.60 - 3.05	< 0.001
No	24	36			
	At	tending a breastf	eeding support gr	oup	
Yes	0	60			
No	0	60			

Administering the questionnaire to both groups was because we wanted to compare if there were any differences in infant and young child feeding practices between the two groups. Those who were exposed to infant and young child feeding counseling were 1.69 times more likely to initiate breastfeeding timely (within the first hour of birth) than those who were not exposed to counseling. The association was statistically significant (p < 0.001).

Those who were exposed to counseling were 0.18 times more likely, thus 82% less likely to introduce solid foods to their children from birth to the time they had their second interview (before six months) than those who were not exposed. The association was statistically significant (p = 0.008). Receiving counselling was protective.

Those who were exposed to counseling were 0.19 times more likely, thus 81% less likely to introduce water to their children from birth to the time they had their second interview (before six months) than those that were not exposed. The association was statistically significant (p < 0.001). Receiving counselling was protective.

Those who were exposed to counseling were 2.2 times more likely to exclusively breastfeed their children than those that were not exposed. The association was statistically significant (p < 0.001).

No one went for the breastfeeding support groups from both the exposed and unexposed groups.

Table 5: Logistic Regression for Practices Independently Associated with community Infant and Young Child Feeding Counseling in Harare City, 2013

Relative Risk	95% CI	p-value
Т	imely initiation of breastfeedi	ng
1.69	1.31 - 2.17	< 0.001
	Giving water	
0.19	0.09 - 0.40	< 0.001
VII)	0.00	0.001
	Giving solids	
	_	
0.18	0.04 - 0.79	0.008
	Exclusive breastfeeding	
2.20	1.60 - 3.05	< 0.001

Those who were exposed to infant and young child feeding counseling were 1.69 times more likely to initiate breastfeeding timely than those who were not exposed to counseling. The association was statistically significant (p < 0.001).

Those who were exposed to counseling were 0.19 times more likely, thus 81% less likely to introduce water to their children from birth to the time they had their second interview (before six months) than those that were not exposed. The association was statistically significant (p < 0.001). Receiving counselling was protective.

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interview (before six months) than those who were not exposed. The association was statistically significant (p = 0.008). Receiving counselling was protective.

Those who were exposed to counseling were 2.2 times more likely to exclusively breastfeed their children than those that were not exposed. The association was statistically significant (p < 0.001).

No one went for the breastfeeding support groups from both the exposed and unexposed groups.

Table 6: Attitudes among the exposed and unexposed groups towards exclusive breastfeeding at baseline

Attitude	Exposed	Unexposed	χ² p value
	n (%)	n (%)	
Positive	30 (50)	19 (32)	0.009
Neutral	17 (28)	12 (20)	
Negative	13 (22)	29 (48)	

Table 7: Attitudes among the exposed and unexposed groups towards exclusive breastfeeding at endpoint

Attitude	Exposed	Unexposed	χ² p value
	n (%)	n (%)	
Positive	55 (92)	38 (63)	< 0.001

Neutral	3 (5)	7 (12)
Negative	2 (3)	15 (25)

Most of the respondents, 92% in the exposed group had a positive attitude towards optimal infant and young child feeding practices as compared to the non-exposed group. The difference was statistically significant [p < 0.001].

Table 8: Attitudes among the exposed and unexposed groups towards exclusive breastfeeding at baseline

	Baseline		
Variable	Exposed	Unexposed	p- value
	n (%)	n (%)	
Breast milk is not enough for the baby in the first six			
months of life			
Agree	34 (57)	42 (70)	0.130
Disagree	26 (43)	18 (30)	
If a baby cries a lot it means it is hungry and needs			
other food			
Agree	32 (53)	40 (67)	0.140
Disagree	28 (47)	17 (33)	
Giving cooking oil in the first six months of life helps			
the baby			
Agree	49 (82)	47 (78)	0.650
Disagree	11 (18)	13 (22)	

Giving water in the first six months of life is good for			
the baby			
Agree	46 (77)	49 (82)	0.500
Disagree	14 (23)	11 (18)	
Mothers who are HIV positive should breastfeed their			
babies			
Agree	46 (77)	33 (55)	0.010
Disagree	14 (23)	27 (45)	
Breastfeeding can make a woman feel important			
Agree	57 (95)	57 (95)	1.000
Disagree	03 (05)	03 (05)	
Breastfeeding can stop mothers form doing their			
household chores			
Agree	15 (25)	25 (42)	0.050
Disagree	45 (75)	35 (58)	
Breastfeeding is embarrassing			
Agree	04 (07)	05 (08)	0.500
Disagree	56 (93)	55 (92)	
Exclusive Breastfeeding is a difficult way to feed			
infants			
Agree	32 (53)	45 (75)	0.010
Disagree	28 (47)	15 (25)	
It is ok to breastfeed in public			
Agree	34 (57)	40 (67)	0.260

Disagree 26 (43) 20 (33)

Generally, there were no statistically significant differences in terms of attitudes towards optimal infant and young child feeding practices between the exposed and unexposed groups. The groups were comparable.

Table 9: Attitudes among the exposed and unexposed groups towards exclusive breastfeeding at endpoint

	Endpoint		
Variable	Exposed	Unexposed	p- value
	n(%)	n(%)	
Breast milk is not enough for the baby in the first six			
months of life			
Agree	16 (27)	31 (52)	0.005
Disagree	44 (73)	29 (48)	
If a baby cries a lot it means it is hungry and needs			
other food			
Agree	23 (38)	26 (43)	0.577
Disagree	37 (62)	34 (57)	
Giving cooking oil in the first six months of life helps			
the baby			
Agree	14 (23)	46 (77)	< 0.001
Disagree	46 (77)	14 (23)	

Giving water in the first six months of life is good for			
the baby			
Agree	10 (17)	42 (70)	< 0.001
Disagree	50 (83)	18 (30)	
Mothers who are HIV positive should breastfeed their			
babies			
Agree	45 (75)	35 (58)	0.053
Disagree	15 (25)	25 (42)	
Breastfeeding can make a woman feel important			
Agree	56 (93)	56 (93)	1.000
Disagree	04 (07)	04 (07)	
Breastfeeding can stop mothers form doing their			
household chores			
Agree	07 (12)	18 (30)	0.013
Disagree	53 (88)	42 (70)	
Breastfeeding is embarrassing			
Agree	00 (00)	03 (05)	0.122
Disagree	60 (100)	57 (95)	
Exclusive Breastfeeding is a difficult way to feed			
infants			
Agree	10 (17)	26 (43)	0.001
Disagree	50 (83)	34 (57)	
It is ok to breastfeed in public			
Agree	46 (77)	40 (67)	0.224

Disagree 14 (23) 20 (33)

There were statistically significant differences between the two groups in the following attitudes: Those in the unexposed group were saying breast milk alone is not enough for the baby in the first six months of life, giving cooking oils helps the baby in the first six months of life, a baby needs water in the first six months of life and that exclusive breastfeeding is a difficult way of feeding infants.

Table 10: Program Indicators at endpoint

Indicator	Target	Exposed	Non – Exposed
	(%)	Achieved (%)	Achieved (%)
Timely initiation of breastfeeding	75	90	53
Knowledge level	50	100	80
Timely initiation of	90	97	82
complementary feeding			
Exclusive breastfeeding rate	50	88	40
Timeliness of reporting	100	100	
Each counsellor following up at	100	90	
least 10 mothers			
Total completeness of registers	100	00	
Each counsellor formed at least	100	00	

The set targets for the program were met except for completeness of registers and forming up at least one functional support group. The community infant and young child feeding program was initiated in Harare City in August 2011.

Focus Group Discussion

Focus group discussion was done with the counsellors. It was highlighted that the program was helpful; it helped mothers on how best to optimally feed their children especially those on antiretroviral therapy. It also came out that the high loss to follow up was due to the community which is highly mobile, some mothers give wrong addresses and the counselors do not have money to make follow up through the phone calls. The other challenge which was highlighted as a hindrance to exclusive breastfeeding was the elderly especially mother in laws who would give water or porridge to children below six months of age. Community involvement was also important. There was a need to include private doctors in the program and leaders of religions. For motivation and support, the counsellors highlighted that they would need bicycles for conducting follow ups, tennis shoes for walking, refresher trainings, support visits, lunch allowances and t-shirts.

CHAPTER 6

DISCUSSION

The statistically significant differences in terms of the mean knowledge score between the exposed and unexposed groups at endpoint could be because of the community infant and young child feeding counseling. However, the knowledge scores between the two groups both at baseline and at endpoint were above 50% and this could be attributed to the routine health education sessions that they receive at health facilities from health workers. Receiving counseling at homes could be more convenient for caregivers since they would be more relaxed in the comfort of their homes and they would have more time to ask questions on an individual basis as compared to a health facility where they would be saying they just want to be served quickly and go back home. Some would even delay coming for the anti- natal checkups because they would want to arrive after the health education session for they perceive it as time consuming. Some caregivers said that exclusive breastfeeding was only for HIV positive mothers and this area needs to be corrected and emphasize on the correct definition of exclusive breastfeeding. In this study, the caregivers were recruited regardless of their HIV status, thus, HIV status was not assessed.

The major reasons for late initiation of breastfeeding were delivery complications. Others would say they were still in pain so they could not initiate breastfeeding immediately and the other reason was because there was no milk coming out. One exceptional case was a mother who had inverted nipples who was saying she cannot breastfeed because she did

not have nipples. However the majority of those who could not initiate breastfeeding timely initiated after one hour of delivery. The reason for those who had already started giving water to their children at the time of the second interview was for religious reasons. They gave their children "holy water" – church leaders would pray for water and command the parents to give the water to the baby for protection against the works of the evil. Others would say everyone including babies needs water to survive so they gave them water. This practice of giving water to children before six months of age translated to the attitude of saying children needs water even sips before six months. Although the mothers know that children should be given water after six months as shown in the knowledge assessments, the issue is on their attitudes and their practices towards giving water before six months.

Giving cooking oil to babies was also a major cause of concern. Caregivers are giving cooking oil to their babies saying that cooking oil aids gastrointestinal movements and also relieves colic. It is also believed that cooking oil makes the fontanel to close. The cooking oil is first warmed and a little salt is added then the baby is given a few drops to half a teaspoonful of the mixture. Those who had already initiated solids to their babies indicated that it was because they felt their babies were crying a lot because they were hungry and breast milk was not enough that was why they introduced solids to their babies before six month, particularly porridge. Another barrier towards exclusive breastfeeding was influence from mothers in law discouraging exclusive breastfeeding. In the absence of the baby's mother, the mothers in law would either give the baby some porridge or water or roots which would have been soaked in water as their traditional

beliefs. This could be the reason why the high knowledge levels are not translating to optimal infant feeding practices. No functional support groups were present, the counselors indicated that it was not easy to form one and gave gatherings in the community since they said police clearance is required for people to gather. The reproductive age in the urban areas are a very mobile community since they would still be lodgers and they move from one place to another making consistent groups difficult and follow ups are also compromised due to this movement. Another factor is that some mothers would give false residential addresses making follow ups difficult. The reason why they gave false addresses is not clear but some do it so that if they have a credit after delivery the debt collectors will not be able to locate them. Those who felt that it was not acceptable to breastfeed in the public was due to religious reasons, their religion does not allow breastfeeding in public. In this study, no one was lost to follow up. Follow ups are also a major challenge to counselors due to limited mobility. They do not have means of transport to move from one place to another or even to follow up the mothers who would have relocated to a different address. There are neither vehicles nor bicycles or a means of communication to contact them in terms of airtime allowances.

Our study findings that community infant and young child feeding counseling has an effect on maternal knowledge, attitudes and practices were consistent with results by Banda M, etal, in Mazowe and Bindura Districts, where they found out that peer nutrition education with combined routine infant feeding counseling is effective in improving maternal breastfeeding knowledge. There were also same findings where their study showed that a peer nutrition education programme had a significant impact on

breastfeeding knowledge and attitudes. The intervention and comparison group were overally similar at baseline, a finding which was also consistent with our study. Following the peer nutrition education program, the intervention group reported higher levels of knowledge and more positive attitudes than the comparison group. They concluded that Peer Counselors can effectively increase maternal breastfeeding knowledge. 12

Timely initiation of breastfeeding was improved through counseling. Similar findings to a Bangladesh study, where they found out that peer counselors can effectively increase the initiation and duration of exclusive breastfeeding. Our exclusive breastfeeding rates were increased with counseling. This shares similar findings with a randomized controlled study of the efficacy of home-based peer counseling to increase the proportion of exclusive breastfeeding among mothers and infants residing in peri urban Mexico City, where they found out that early and repeated contact with peer counselors was associated with a significant increase in breastfeeding exclusivity and duration. ¹⁰

Anderson A.K, shares similar findings to our study findings. In their study they found out that a well-structured, intensive breastfeeding support provided by hospital and community-based peer counselors is effective in improving exclusive breastfeeding rates among low-income, inner-city women in the United States.¹¹

The program is performing well. It managed to meet the set targets for the program except for completeness of registers and forming up at least one functional support group.

Validity of results

Since it was a before and after study, the outcomes of interest had not yet occurred at the time the study began, bias in the selection of subjects and ascertainment of exposure was minimized because the outcomes of interest had not yet occurred at the beginning of the study. The participants did not have the outcomes of interest at the time the exposure status was identified, thus, the temporal sequence between the exposure and the outcome could be more clearly elucidated. The validity of our study was enhanced by the absence of losses to follow up¹⁵.

CHAPTER 7

CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusion

Community infant and young child feeding counseling has an effect on knowledge, attitudes and practices on optimal infant feeding amongst women in Harare City.

Mothers who have received counseling in community infant and young child feeding had higher knowledge levels on optimal infant and young child feeding than those that had not.

Mothers who have received counseling in community infant and young child feeding initiated their infants to breastfeeding more timely than those that had not. The effect of midwives would be similar in both the exposed and unexposed groups, It ultimately would be the mother's choice to initiate breastfeeding timely to their babies.

More mothers who have not received counseling in community infant and young child feeding gave water and solids to their infants from birth to the time of the second interview than mothers who have received counseling.

More mothers who have received counseling in community infant and young child feeding had a positive attitude towards optimal infant and young child feeding than those that have not.

There were no differences in terms of attending breastfeeding support groups among mothers who have received counseling in community infant and young child feeding and those that have not.

7.2 Public Health Actions Taken

The findings of the study were presented to district medical officers for the city of Harare, top management, the nutritionist and health promoter coordinators.

7.3 Recommendations

It is recommended that the nutritionist and the health promotion officer plan and conduct refresher trainings by December 2013 to health promoters/counselors on record keeping since data quality was poor (total completeness of registers was zero percent against a target of one hundred percent).

It is also recommended to the nutritionist that religious leaders and private practioners be informed on optimal infant and young child feeding so that the same message can be sent to the community.

For enhanced follow up, it is recommended that the director of health services provide bicycles to health promoters for easy movement during follow ups and home visits.

Since the program has an effect on optimal infant and young child feeding practices it is recommended that the Director of Health Services to increase coverage for the areas in which health promoters are covering.

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Appendices

Appendix 1: English Questionnaire

Data collection tool for mothers

Good morning/afternoon. My name is Faith Kamusono, I am a Public Health Officer

carrying out a research on effect of community infant and young child feeding counseling

program on infant feeding practices in Harare City. May I please ask you to assist me

with some information about optimal infant feeding practices? Any information that we

are going to discuss will be treated as strictly confidential and will be used to make

improvements in the prevention and control of malnutrition and infant feeding practices

in Harare City. You are free to make a choice on whether you want to participate or not.

Would you like to participate in this study?

Yes

No (EXCLUDE FROM STUDY)

Reasons for Refusal:

Too busy to grant interview

Not willing to participate in any interview

Other (specify)

49

SECTION A: SOCIODEMOGRAPHIC DATA

1:	Respondent's age in years
2:	How many children do you have besides the one you are carrying/breastfeeding?
3:	How old is your youngest child? Years
4:	What is your marital status? Married Single Widowed
	☐ Divorced ☐ Cohabiting ☐ Other, specify
5:	What is your highest level of education? Primary Secondary
	☐ Tertiary ☐ Other, specify

6:	What is your occupation?
	Formally employed
	☐Informally employed
	House wife
	Other, specify
7:	What is your religion?
	Apostolic
	□Non- apostolic
	None
	Other, specify
SECT	ION B: KNOWLEDGE OF OPTIMAL IYCF PRACTICES
8:	What is the first feed that should be given to a baby?
	Breast milk
	Water
	Porridge
	Other specify
9:	How long after birth should a baby receive its first feed?
	Within one hour
	After one hour
	After one day

	Don't know
10:	At what age should a baby be given water?
	Less than 7 days
	After 6 months
	Don't know
11:	For how long should a baby be breastfed?
	<6 months
	6-12 months
	1-1.5 years
	2years or more
12:	What is meant by exclusive breastfeeding?
	Giving only breast milk only without even water for the first six months of life
	Other specify
	☐ Don't know
13:	What do you think are the benefits of exclusive breastfeeding? (Tick all that
apply)	

	Protects baby's health
	☐ Bonding between baby and mother
	☐ Has enough nutrients and water for the baby
	☐ Don't know
	Other specify
14:	At what age should a baby be given other foods (solid foods)?
	Before 6 months
	After 6 months
	Other specify
	Don't know
15:	What do you think is the importance of complementary feeding?
	☐ It gives the baby more energy
	To cover nutritional gaps left by breast milk
	Other specify
	☐ Don't know
16:	How would you care/feed a sick child?

	Go to clinic with him/her
	☐ Feed him/her patiently
	Other specify
	□Don't know
17:	Did you receive iron supplements during your pregnancy?
	Yes
	□ No
18:	What do you think are the benefits of iron supplements during pregnancy?
	☐ Supplements iron for blood formation to meet the increased demand.
	Other specify
	☐ Don't know
19:	In your own opinion, should an HIV positive mother bear children?
	☐ Yes ☐ No
20:	In your own opinion, should an HIV positive mother breastfeed?
	Yes
	□No
21:	Do you think it's important to know your HIV status?

	Yes
	□ No
22:	Have you been tested for HIV?
	Yes
	□ No
23:	Do you attend any breastfeeding support group?
	Yes
	□ No
Section	n C: Breastfeeding Attitudes
24.	Breast milk is not enough for the baby in the first six months of life
	a) Strongly agree b) agree c) neutral d) disagree e) strongly disagree
25.	If a baby cries a lot it means it is hungry and needs other food
	a) Strongly agree b) agree c) neutral d) disagree e) strongly disagree
26.	Giving cooking oil in the first six months of life helps the baby
	a) Strongly agree b) agree c) neutral d) disagree e) strongly disagree

27.	A baby needs water (even	sips) in the	first six mon	ths of life
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
28.	Mothers who are HIV posi	tive should	breastfeed th	eir babies
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
29.	Breastfeeding can make a	woman feel	important	
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
30.	Breastfeeding can stop mo	thers form o	doing their ho	ousehold chores
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
31.	Breastfeeding is embarras	sing		
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
32.	Exclusive Breastfeeding is	a difficult	way to feed in	nfants
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree
33.	It is ok to breastfeed in pub	olic		
	a) Strongly agree b) agree	c) neutral	d) disagree	e) strongly disagree

Section D: Infant feeding practices

(For these questions it's for a previous child at the baseline and then for the new baby at
follow up)
34. Do you have a child besides the one that you are carrying?
☐ Yes
□No
If no proceed to question 38
35. When did you start giving your youngest baby breast milk?
☐ Within the first hour of delivery
After 12 hours after delivery
After 1 day
After 2 days or more
36. When did you start giving your youngest baby water?
After 2 days
After 1 week
After 2 weeks
After 6 months
Other specify
37. When did you start giving your youngest baby solids?
After 2 days
After 1 week

	After 2 weeks
	After 6 months
	Other specify
38. Do	you attend any breastfeeding support group?
	Yes
	□ No

Appendix 2: Shona Questionnaire

Gwaro rokubvunza vana amai

Mangwanani/masikati. Ini ndinonzi Faith Kamusono, ndiri mudzidzi wezveutano weveruzhinji paYunivhesiti yeZimbabwe. Ndiri kuita tsvagurudzo yekuona mashandiro echirongwa chekukurukura pamusoro pezvekudya kwevana tichitarisa maererano neruzivo, mafungiro netsika dzemachengeterwo evana muguta reHarare. Ndokumbirawo kukubvunzai maererano nekuchengetwa kwevana. Zvatichakurukura pano zvichachengetedzwa pakavandika uye zvichashandiswa kuwedzera mabatsiriro atinoita pakuchengetwa kwevana muguta reHarare. Makasununguka kuita sarudzo yekupinda muongoro ino kana kusapinda muongoro ino.

Ndingapfuurira mberi here?
Hongu
Kwete
Zvikonzero zvokuramba:
Vakabatikana kupinda muongororo
Havana kusununguka kupinda muongororo
Zvimwe (tsanangura)

CHIKAMU CHOKUTANGA: ZVAKANANGANA NOHUPENYU

1:	Mune makore mangani okuberekwa
2:	Mune vamwe vana vangani asiri wamakatakura/wamuri kuyamwisa?
3:	Mwana wenyu wokupedzisira ane makore mangani? Makore
4:	Makawanikwa here? Ndakawanikwa Handina kuwanikwa Ndakafirwa
	☐ Takarambana ☐ Tiri kubika mapoto ☐ Zvimwe, tsanangura
5:	Makasvika danho ripi nedzidzo? Primary Secondary Tertiary Zvimwe, tsanangura
6:	Munoshanda basa ripi?

	Formally employed
	Informally employed
	Handiende kubasa
	Zvimwe, tsanangura
7:	Munotevedza chitendero chipi?
	Mapositori
	Asiri mapositori
	☐ Hapana
	Zvimwe, tsanangura
СНІ	KAMU CHEPIRI: RUZIVO PAMACHENGETERWO EVANA
8:	Ndechipi chikafu chekutanga chinofanirwa kupihwa mwana?
	☐Mukaka wamai
	☐Mvura
	□Bota
	Zvimwe (tsanangurai)
0	
9:	Mushure mokuzvarwa, mwana anofanirwa kuwana kudya kwake kwokutanga
	kwapera nguva yakadii?
	Muawa yekutanga
	☐Kwapera awa imwe chete
	☐Kwapera zuva rimwe chete

	Handizivi
10:	Mwana anofanirwa kupihwa mvura akura zvakadii?
	Ari pasi pemazuva manomwe
	Ari pasi pemwedzi mitanhatu
	Kwapera mwedzi mitanhatu
	Handizivi
11:	Mwana anofanirwa kuyamwiswa kwenguva yakadii?
	Ari pasi pemwedzi mitanhatu
	Ari pakati pemwedzi mitanhatu negore
	Ari pakati pegore negore nemwedzi mitanhatu
	Makore maviri kana kupfuura
12:	Exclusive breastfeeding zvinorevei?
	☐ Kupa mukaka wamai chete pasina kana mvura kwemwedzi mitanhatu
	Zvimwe, tsanangura
	Handizivi
13:	Exclusive breastfeeding zvinorevei? (Sarudzai zvose zvinokodzera)
	Zvinochengetedza utano hwemwana

	Zvinovaka ukama pakati pamai nemwana
	Une chikafu nemvura zvakakwanira mwana
	Handizivi
	Zvimwe, tsanangura
14:	Mwana anofanirwa kupihwa kumwe kudya akura zvakadii (zvisiri mukaka)?
	Ari pasi pemwedzi mitanhatu
	Adarika mwedzi mitanhatu
	Zvimwe, tsanangura
	□Handizivi
15:	Chii chakakoshera kupa mwana chimwe chikafu kuwedzera mukaka?
	Zvinopa samba rakawedzera kumwana
	Kuzadzikisa panenge pasiyiwa nemukaka
	Zvimwe, tsanangura
	Handizivi
16:	Mwana ari kurwara anochengetwa sei?
	Anoendwa naye kukiriniki/chipatara

	☐ Kumupa kudya nemoyo murefu
	Zvimwe, tsanangura
	☐ Handizivi
17:	Makambopihwa mapiritsi okuwedzera ropa here pamakazvitakura?
	Hongu
	Kwete
18:	Mapiritsi okuwedzera ropa akanakirei kana munhu achinge akazvitakura?
	Anowedzera zvinobatsira kugadzirwa kweropa kunenge kwawedzera.
	Zvimwe, tsanangura
	Handizivi
19:	Mafungiro enyu, mukadzi akabatwa nehutachiona hweHIV anofanirwa kuzvara here?
	☐ Hongu ☐ Kwete
20:	Mafungiro enyu, mukadzi akabatwa neutachiona hweHIV anofanirwa kuyamwisa mwana wake here?
	Hongu
	☐ Kwete

21:	munofunga kuti zvakakosha here kuziva paumire maererano neHIV?
	Hongu
	Kwete
22:	Makanoongororwa here maererano nezve HIV?
	Hongu
	Kwete
23:	Muri nhengo here yeboka rezvinokurudzirana kuyamwiswa kwevana?
	Hongu
	Kwete
CHIK	AMU CHECHITATU: MAFUNGIRO PANE ZVOKUYAMWISA
24.	Mukaka wamai chete haukwaniri mwana kwemwedzi mitanhatu a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e) handibvumi zvikuru
25.	Kana mwana achichema zvikuru zvinoreva kuti ane nzara uye anoda chimwe chikafu a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibyumi zvikuru

26.	Kupa mwana mafuta mumwedzi mitanhatu dzokuberekwa kwomwana kunobatsira
	a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e) handibvumi zvikuru
27.	Mwana anoda kupihwa mvura (chero madonhwe) mumwedzi mitanhatu yokuzvarwa a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibvumi zvikuru
28.	Vana mai vakabatwa neutachiona hweHIV vanofanirwa kuyamwisa vana vavo
	a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e) handibvumi zvikuru
29.	Kuyamwisa kunoita kuti mukadzi anzwe kuti akakosha a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e) handibvumi zvikuru
30.	Kuyamwisa kunomisa vana mai kuita mabasa avo epamba a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibvumi zvikuru

31.	Kuyamwisa kunonyadzisa
	a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibvumi zvikuru
32.	Kupa mwana mukaka wamai chete inzira inogozha yekuchengeta vana
	a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibvumi zvikuru
33.	Zvinogashirika kuyamwisa muruzhinji
	a) kubvuma zvikuru b) kubvuma c) pakati nepakati d) handibvumi e)
	handibvumi zvikuru
СНІК	KAMU CHECHINA: TSIKA DZOKUCHENGETA VANA
34:	Mune mumwe mwana here asiri wamakatakura?
	Hongu
	☐Kwete (endai kumubvunzo 38)
35:	Makatanga kupa mwana wenyu mudiki mukaka wamai kwapera nguva yakadii?
	☐ Muawa imwe chete mushure mokusununguka
	Kwapera maawa gumi nemaviri mushure mokusununguka
	☐ Kwapera zuva rimwe chete

	☐ Kwapera mazuva maviri
36:	Makatanga kupa mwana wenyu mudiki mvura mushure mokuzvarwa kwapera
	nguva yakadii?
	☐ Kwapera mazuva maviri
	☐ Kwapera svondo rimwe
	☐ Kwapera masvondo maviri
	☐ Kwapera mwedzi mitanhatu
	Zvimwe, tsanangura
37:	Makatanga kupa mwana wenyu mudiki kumwe kudya kwapera nguva yakadii
	mushure mokuzvarwa?
	After 2 days Kwapera mazuva maviri
	After 1 week Kwapera svondo rimwe
	After 2 weeks Kwapera masvondo maviri
	After 6 months Kwapera mwedzi mitanhatu
	Zvimwe, tsanangura
38:	Muri nhengo here yeboka rezvinokurudzirana kuyamwiswa kwevana?
	Hongu
	Kwete

Appendix 3: Key Informant Interview Guide

- 1. Are there any breastfeeding support groups formed?
- 2. How often do they meet?
- 3. Do you cover infant and young child feeding issues in your routine health education sessions? If yes how often?
- 4. Which topics have you discussed?
- 5. How receptive is the community to the program?
- 6. Have any issues been referred to you by the counsellors?
- 7. What challenges are being faced by the program?
- 8. How best do you think these challenges can be addressed?
- 9. Is there any additional support that you may require?

Appendix 4: Focus Group Discussion Guide

- 1. What do you think about the program?
- 2. What is your view towards community infant and young child feeding?
- 3. How is the program performing? / May you highlight some challenges the program could be facing?
- 4. How best do you think these challenges can be addressed?
- 5. What do you like best about the program?
- 6. Is there anything else that you to tell me about?

Appendix 5: English Consent Form

Introduction

Topic: Effect of Community Infant and Young Child Feeding (cIYCF) counseling

program on Infant Feeding Knowledge, Attitudes and Practices in Harare City 2013

Principal investigator: Faith Kamusono [BScDN (UZ)]

Phone number: 0772 366 787 or 04 774141/2 extension 3047

What you should know about this research study:

• We give you this consent so that you may read about the purpose, risks, and

benefits of this research study.

The main goal of this research is to gain knowledge that may help you and future

women.

• We cannot promise that this research will benefit you directly.

• You have the right to refuse to take part, or agree to take part now and change

your mind later.

Whatever you decide, it will not affect your regular care.

• Please review this consent form carefully. Ask any questions before you make a

decision.

• Your participation is voluntary.

71

Purpose

You are being asked to participate in a study on: Effect of Community Infant and Young Child Feeding (cIYCF) counseling program on Infant Feeding Knowledge, Attitudes and Practices in Harare City 2013. This study seeks to understand the knowledge levels, attitudes and practices on infant feeding in Harare City. One hundred and twenty respondents are going to be enrolled in this study.

Procedures and Duration

Group 1: If you decide to participate, you will be interviewed using an interviewer administered questionnaire. It will take about 15 minutes.

A health promoter is going to give you four counseling sessions in the following eight weeks. There are two weeks intervals between one counseling session and the next. Each session will last approximately 20-30 minutes. You will be interviewed again after 8 weeks using an interviewer administered questionnaire and it will take about 15 minutes. Group 2: If you decide to participate, you will be interviewed using an interviewer administered questionnaire. It will take about 15 minutes. You will be interviewed again after 8 weeks using an interviewer administered questionnaire and it will take about 15 minutes.

Risks and Discomforts

Its study is not expected to cause any discomfort or physical risk.

Benefits and/or Compensation

We do not promise that you will receive monetary or material benefits from this study.

Being in this study may give you an opportunity to learn and understand more on how to optimally feed your infant.

Confidentiality

If you indicate your willingness to participate in this study by signing this document, we will not include your name on the questionnaire. We plan to disclose any information obtained from this study to Harare City Health Department and the Academic panel of the University of Zimbabwe for the purpose of improving service delivery to our clients. Any information obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission.

Additional Costs

There will be no additional costs to you.

Voluntary Participation

Participation in this study is voluntary. If you decide not to participate in this study, your decision will not affect your future relations with Harare City Health Department and its personnel. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty.

Offer to Answer Questions

Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think over it.

Authorization

You are making a decision whether or not to participate in thi	s study. Your signature
indicates that you have read and understood the information p	provided above, have had all
your questions answered, and have decided to participate.	
	·
Name of Research Participant (please print)	Date

Signature of Participant or legally authorized representative Time

You will be given a copy of this consent form to keep

If you have any questions concerning this study or concerns beyond those answered by the investigator, including questions about the research, your rights as a research subject or research-related injuries, or if you feel that you have been treated unfairly and would like to talk to someone other than a member of the research team, please feel free to contact the Medical Research Council of Zimbabwe on telephone 04-791792 or 04-791193.

Appendix 6: Shona Consent Form

TSAMBA YECHITENDERANO

Kutanga

Tsvagurudzo yekuona mashandiro echirongwa chekukurukura pamusoro pezvekudya

kwevana tichitarisa maererano neruzivo, mafungiro netsika dzemachengeterwo evana

muguta reHarare.

Muongorori: Faith Kamusono [BScDN (UZ)]

Nhamba dzenhare: 0772 366 787 or 04 774141/2 extension 3047

Zvamunofanira kuziva maererano neongororo ino:

Tirikukupai tsamba yechitenderano chino kuti mugonzwisisa zvinangwa

zveongororo ino, zvakaipa uye zvakanakira ongororo ino.

Chinangwa cheongororo ino ndechekutsvaga ruzivo runozobatsira pakubatsirwa

kwenyu nemamwe madzimai mune ramangwana.

Hatikuvimbisei kuti pane zvamuchawana kuburikidza nekupinda muongororo ino.

Makasununguka kuramba kupinda muongororo ino kana kubvuma kupinda iye

zvino asi mozoramba panguva inotevera.

Kubvuma kana kuramba kupinda mongororo ino, hazvikanganise

kubatsirwa kwenyu panguva inotevera.

75

- Nyatsoverengai nekunzwisisa gwaro rino zvakakwana. Kana paine mibvunzo, sunungukai kubvunza musati masarudza kupinda kana kusapinda muongororo ino.
- Kupinda kwenyu muongororo ino hakumanikidzwe.

Chinangwa

Muri kukumbirwa kuti mupinde mutsvagurudzo yekuona mashandiro echirongwa chekukurukura pamusoro pezvekudya kwevana tichitarisa maererano neruzivo, mafungiro netsika dzemachengeterwo evana muguta reHarare. Ongororo iyi inotsvaga ruzivo, mafungiro netsika pamusoro pezvokudya kwevana muguta reHarare. Makasarudzwa vanhu zana nemakumi maviri kupinda muongororo ino.

Maitirwo nenguva yeongororo

Boka rekutanga: Mukabvuma kupinda muongororo ino muchange muchibvunzwa mibvunzo inogona kutora maminitsi gumi nemashanu. Mbuya hutano vachazokurukura nemi runa maererano nezvekudya munguva yemasvondo masere achatevera. Hurukuro idzi munenge muchizoita kwapera masvondo maviri ega ega. Hurukuro imwe chete inotora maminitsi makumi maviri. Muchazobvunzwa zvakare mibvunzo mushure memasvondo masere aya kwemaminitsi gumi nemashanu.

Boka rechipiri: Mukabvuma kupinda muongororo ino muchange muchibvunzwa mibvunzo inogona kutora maminitsi gumi nemashanu. Muchazobvunzwa zvakare mibvunzo mushure memasvondo masere kwemaminitsi gumi nemashanu.

Njodzi nekushungurudzika

Hapana njodzi kana kushungurudzika kwatinotarisira kusangana nako muongororo ino.

Zvakanakira kuva muongororo

Hapana muripo wemari kana zvinhu zvamuchawana kuburikidza nekuva muongororo ino asi kuti muchawana mukana wokudzidza zvakawanda maererano nezvekudya zvakanaka kuvana.

Kuvimbika kweongororo

Kana mukasarudza kupinda muongororo ino kuburikidza nokuisa runyoro rwenyu, zita renyu harisi kuzoiswa pagwaro rinenge rine mhinduro dzenyu. Zvatinenge tawana mutsvagurudzo ino tinotarisira kuzivisa vebazi rezveutano veguta reHarare nevadzidzisi vedu vepaYunivhesiti yeZimbabwe nechinangwa chekuda kuwedzera mabatsiriro atinoita vagari vedu vemuHarare. Zvichawanikwa muongoro ino zvinogona kunangana nemi zvinochengetedzwa muchiwande zvinogona kuzoburitswa chete kana imi muchinge mazvitendera.

Mumwe muripo

Hamuna chamunobhandara muongororo ino.

Kusununguka kupinda muongororo

Isarudzo yenyu kupinda muongororo ino. Kusarudza kusapinda muongororo ino hakukanganisi hukama hwenyu nevabazi rezveutano veguta reHarare. Mukasarudza

kupinda muongororo ino pari zvino, makasununguka kusarudza kubuda muongororo panguva inotevera pasina muripo.

Kupindurwa kwemibvunzo

Musati maisa runyoro rwenyu pabepa rino, makasunungoka kubvunza mibvunzo pamunenge musina kunzwisisa. Makasununguka kutora nguva yenyu yamunoda kana muchida kumbonotanga mafunga nezvazvo.

Mvumo

Muni luita comuda valgoninda kona kucaninda muana	omono ino Dunyono myyonyny	
Muri kuita sarudzo yekupinda kana kusapinda muongo	ororo iilo. Kunyoro rwenyu	
runoratidza kuti maverenga uye manzwisisa umbowo hwamapihwa, majekeserwa		
pamaive musina kunzwisisa uye masarudza kupinda m	nuongororo ino.	
Zita remupinduri (nyorai zvinooneka)	Zuva	
Runyoro rwechibvumirano rwemupinduri	Nguva	

Muchapihwa imwe tsamba yechitenderano kuti muzvichengetere

Kana mune mibvunzo isina kupindurwa nemuongorori zvichisanganisira mibvunzo pamusoro peongororo ino, kodzero dzenyu semupinduri kana mibvunzo yakanangana nekubatwa kwamaitwa muongororo ino, kana kusabatwa zvakanaka kwamunenge

maitwa makasununguka kubata veMedical Research Council of Zimbabwe panhamba dzerunhare dzinoti: 04-791792 kana 04-791193.

Appendix 7: Records Review

- 1. Each counsellor should follow up at least ten mothers monthly
- 2. Each counsellor to form at least one support group
- 3. Completeness of registers
- 4. Timeliness of reporting -26^{th} of every month

Appendix 8: JREC Approval Letter



Joint Parirenyatwa Hospital And College of Health Sciences **Research Ethics Committee**



Group of Hospitals

5th Floor College of Health Sciences Building Telephone: 236 4 708140 Email: medirural@medsch.uz.ac.zw

University of Zimbabwe College of Health Sciences

APPROVAL LETTER

Date: 2nd May 2013

JREC Ref: 33/13

Name of Researcher: Faith Kamusono

University of Zimbabwe, Department of Community Medicine

Re: Title of Study: Effect Of Community Infant And Young Child Feeding (cIYCF) Counseling Program On Infant Feeding Knowledge, Attitudes And Practices In Harare City.

Thank you for your application for ethical review of the above mentioned research to the Joint Research Ethics Committee. Please be advised that the Joint Research Ethics Committee has reviewed and approved your application to conduct the above named study.

APPROVAL NUMBER:

JREC/33/13

APPROVAL DATE:

2nd May 2013

EXPIRATION DATE:

1st May 2014

• TYPE OF MEETING:

Expedited Review

This approval is based on the review and approval of the following documents that were submitted to the Joint Ethics Committee:

- a) Completed application form
- b) Full Study Protocol Version number:
- c) Informed Consent in English and/or appropriate local language
- d) Data collection tool version:

After this date the study may only continue upon renewal. For purposes of renewal please submit a completed renewal form (obtainable from the JREC office) and the following documents before the expiry date:

- a. A Progress report
- b. A Summary of adverse events.
- c. A DSMB report
- MODIFICATIONS:

Prior approval is required before implementing any changes in the protocol including changes in the informed consent.

TERMINATION OF STUDY:

On termination of the study you are required to submit a completed request for termination form and a summary of the research findings/ results.

Yours Faithfully

Professor MM Chidzonga

JREC Chairman

OHRP IRB Number: IORG 00008914 PARIRENYATWA GROUP OF HOSPITALS FWA: 00019350

Appendix 9: MRCZ Approval Letter

Telephone: 791792/791193/792747

Telefax: (263) - 4 - 790715 E-mail: mrcz@mrcz.org.zw Website:- www.mrcz.org.zw



Medical Research Council of Zimbabwe Josiah Tongogara / Mazoe Street P. O. Box CY 573

Causeway Harare

APPROVAL

Ref: MRCZ/B/497

10 May, 2013

Faith Kamusono
UZ College of Health Sciences
P.O Box A178
Avondale
Harare
Zimbabwe

RE: Effect of Community Infant and Young Child Feeding (cIYCF) Counselling program on infant feeding knowledge, attitudes and practices in Harare city.

Thank you for the above titled proposal that you submitted to the Medical Research Council of Zimbabwe (MRCZ) for review. Please be advised that the Medical Research Council of Zimbabwe has <u>reviewed</u> and <u>approved</u> your application to conduct the above titled study. This is based on the following documents that were submitted to the MRCZ for review.

- a) Research proposal and summary
- b) Parental Informed Consent Form (English and Shona)
- c) Questionnaire (English and Shona)
- APPROVAL NUMBER

:MRCZ/B/497

This number should be used on all correspondence, consent forms and documents as appropriate.

APPROVAL DATE : 10 May 2013
 TYPE OF MEETING : Expedited
 EXPIRATION DATE : 09 May 2014

After this date, this project may only continue upon renewal. For purposes of renewal, a progress report on a standard form obtainable from the MRCZ website or our website should be submitted three months before the expiration date for continuing review.

- SERIOUS ADVERSE EVENT REPORTING: All serious problems having to do with subject safety must be
 reported to the Institutional Ethical Review Committee (IERC) as well as the MRCZ within 3 working days
 using standard forms obtainable from the MRCZ website: www.mrcz.org.zw
- MODIFICATIONS: Prior MRCZ and IERC approval using standard forms obtainable from the MRCZ website
 is required before implementing any changes in the Protocol (including changes in the consent documents).
- TERMINATION OF STUDY: On termination of a study, a report has to be submitted to the MRCZ using standard forms obtainable from the MRCZ website.
- QUESTIONS: Please contact the MRCZ on Telephone No. (04) 791792, 791193 or by e-mail on mrc.zimbabwe@yahoo.com or mrcz@mrcz.org.zw

Other:

- Please be reminded to send in copies of your final research results for our records as well as for the Health Research Database
- You are also encouraged to submit electronic copies of your publications in peer-reviewed journals that may
 emanate from this study.

Yours Faithfully

MRCZ SECRETARIAT FOR CHAIRPERSON

MEDICAL RESEARCH COUNCIL OF ZIMBABWE

MEDICAL RESEARCH COUNCIL OF ZIMBABWE

2013 -05- 1 U

APPROVED

MEDICAL RESEARCH COUNCIL OF ZIMBABWE

PROMOTING THE ETHICAL CONDUCT OF HEALTH RESEARCH