

2020-03-17

ACCEPTABILITY AND ASSOCIATED FACTORS FOR READY TO USE FOOD AMONG ADULT HIV PATIENTS IN FELEGEHIWOT REFERRAL HOSPITAL, NORTH-WEST ETHIOPIA

TESHOME, MUHABAW

<http://hdl.handle.net/123456789/10472>

Downloaded from DSpace Repository, DSpace Institution's institutional repository



BAHIR DAR UNIVERSITY

**BAHIR DAR INSTITUTE OF TECHNOLOGY
SCHOOL OF RESEARCH AND GRADUTE STUDIES
FACULTY OF CHEMICAL AND FOOD ENGINEERING**

**ACCEPTABILITY AND ASSOCIATED FACTORS FOR READY TO
USE FOOD AMONG ADULT HIV PATIENTS IN FELEGEHIWOT
REFERRAL HOSPITAL, NORTH-WEST ETHIOPIA**

**BY
MUHABAW TESHOME MAME**

FEBRUARY, 2018

**ACCEPTABILITY AND ASSOCIATED FACTORS FOR READY TO USE FOOD
AMONG ADULT HIV PATIENTS IN FELEGEHIWOT REFERRAL
HOSPITAL, NORTH-WEST ETHIOPIA**

MUHABAW TESHOME MAME

A Thesis Submitted to Research and Graduate studies of Bahir Dar Institute of
Technology in partial fulfillment of The Requirement for the Degree of Master of
Science in Applied Human Nutrition in the Faculty of Chemical and Food Engineering

Advisor: DEREJE BIRHANU (Asst.Professor)

Bahir Dar, Ethiopia

Febraury, 2018

DECLARATION

I, the undersigned, declare that the thesis comprises my own work. In compliance with internationally accepted practices, I have dually acknowledged and refereed all materials used in this work. I understand that non-adherence to the principles of academic honesty and integrity, misrepresentation/ fabrication of any idea/data/fact/source will constitute sufficient ground for disciplinary action by the university and can also evoke penal action from the sources which have not been properly cited or acknowledged.

Name of student: **Muhabaw Teshome**

Signature _____



Date of submission: **February, 2018**

© 2018
Muhabaw Teshome
ALL RIGHTS RESERVED

Bahir Dar University
Bahir Dar Institute of Technology
School of Research and Graduate Studies
Faculty of Chemical and Food Engineering

THESIS APPROVAL SHEET

Muhabaw Teshome

Student Name


Signature

23/09/2010
Date

The following graduate faculty members certify that this student has successfully presented the necessary written final thesis and oral presentation for partial fulfillment of the thesis requirements for the Degree of Master of Science in Applied Human Nutrition

Approved By:

Dereje Birhanu

Advisor


Signature

05 June 2018
Date

Amare Tanski (As. Prof.)

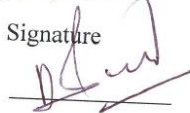
External Examiner


Signature

8/6/2018
Date

Prof. Reddy P. S. Prasad

Internal Examiner


Signature

9/6/2018
Date

Mesfin Wogayehu

Chair holder


Signature

08/06/2018
Date

Ali Seid

Faculty Dean


Signature

02/06/2018
Date

To my colleagues

ACKNOWLEDGEMENT

I would like to thank the Bahir Dar University, School of Chemical and Food Engineering for giving me the opportunity to conduct this research.

I am also grateful to my adviser Dereje Birhanu for his unreserved guidance and constructive suggestions and comments, in each step of the research process.

I would like to acknowledge the study participants for their willingness during the data collection period.

Finally, I would like to extend my special thanks to Felegehiwot Referral Hospital for their generous assistant for providing necessary information.

ABSTRACT

Introduction: Ready-to-use products are designed to be consumed directly and do not require preparation. These include lipid-based nutrient supplements and ready-to-eat biscuits. These products can be divided into two groups: Ready to-use therapeutic foods (RUTFs) and Ready-to-use supplementary foods.

Objective: The aim of this study was to assess acceptability of ready to use food and associated factors of ready to use Food among adult ART clients in Felegehiwot Referral Hospital, 2016.

Method: Institutional based cross sectional study was carried out on ready to use food treatment center on 422 randomly selected malnourished adult HIV patients at Felegehiwot Referral Hospital from October 1 to November 30 2016. The data was coded and entered to SPSS version 21 for analysis and the data was presented by tables, frequencies and factors associated with acceptability was done using regression analysis and variables with p value <0.05 was considered as statistically significant.

Result: Of the total of 420 ready to use food (RUF) study participants, 294 (70%) accepted RUF completely and 126(30%) had refused either because of the unpleasant taste, smell unattractive color or consistency. About 96% of the participants accepted the taste and 84% accepted the smell and 64.8% reported with no side effects associated with ready to use food (RUF) taking. This finding showed that, who know their duration of treatment showed significant difference in acceptability compared with that did not know their duration of treatment.

Conclusion and recommendation:

In conclusion there should be adherence counseling on ready to use food advantage in order to increase its acceptability on people living with HIV.

Keywords: Ready to use food, ready to use supplementary food, acceptability

TABLE OF CONTENTS

DECLARATION.....	Error! Bookmark not defined.
ACKNOWLEDGEMENT	v
TABLE OF CONTENTS.....	vii
LIST OF FIGURES	ix
LIST OF TABLES	x
ACRONYMS	xi
1 INTRODUCTION	1
1.1 Background	1
1.2 Statement of the problem.....	3
1.3 Literature review	4
1.4 Justification	8
2 OBJECTIVES.....	9
2.1 General objective.....	9
2.2 Specific objectives.....	9
3 METHODS.....	10
3.1 Study design, area and period	10
3.1.1 Study design.....	10
3.1.2 Study area and period	10
3.2 Population	10
3.2.1 Source population.....	10
3.2.2 Study population	10
3.2.3 Sampling unit	10
3.3 Inclusion and exclusion criteria	11
3.3.1 Inclusion criteria.....	11
3.3.2 Exclusion criteria.....	11
3.4 Sample size determination	11
3.5 Sampling technique and procedure	11
3.6 Study variables	12
3.6.1 Dependent variables	12
3.6.2 Independent variables	12

3.7	Operational definition.....	12
3.8	Data collection procedure	12
3.8.1	Data collection instrument	13
3.8.2	Data collectors.....	13
3.9	Data Measurement.....	13
3.10	Data quality control.....	13
3.11	Ethical considerations	13
3.12	Data management and analysis.....	14
3.13	Dissemination and utilization of the result.....	14
4	RESULTS.....	15
4.1	Socio Demographic Characteristics	15
4.2	Knowledge factors.....	17
4.3	Health related factors.....	18
4.4	Behavioral factors.....	19
4.5	Five point hedonic scale for acceptability of RUF.....	20
4.6	Acceptability of RUF.....	20
4.7	Factors associated with ready to use food acceptability.....	22
5	DISCUSSION.....	24
6	CONCLUSION AND RECOMMENDATION	26
	REFERENCES.....	27
	ANNEXES	30
	Consent form	30
	English Questionnaire.....	31
	አማርኛ መጠይቅ	40

LIST OF FIGURES

Figure 1. Conceptual framework on acceptability of RUTF	7
---	---

LIST OF TABLES

Table 1: <i>Demographic profile of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017</i>	16
Table 2: <i>Knowledge factors characteristics of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017</i>	17
Table 3: <i>Health related factors characteristics of adult ART clients who took RUF in Felegehiwot</i>	18
Table 4: <i>Behavioral factors characteristics of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017</i>	19
Table 5: <i>Five point hedonic scale for acceptability of RUF on adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017</i>	20
Table 6: <i>Measures of Ready to use food acceptability, Felegehiwot referral hospital, Ethiopia, 2017.</i>	21
Table 7. <i>Logistic regression analysis showing the association of RUF acceptability with different variables</i>	23

ACRONYMS

ART – Antiretroviral Therapy

BMI – Body Mass Index

CAH – Child and Adolescent Health

FBP – Food by Prescription

HAZ – Height for Age Z-score

HEBI - High-Energy Bar for Integrated Management of Acute Malnutrition

HIV – Human Immune Virus

NHD- Nutrition for Health and Development

PPN – Plumpy ‘Nut

RUF – Ready to Use Food

RUSF – Ready to Use Supplementary Food

RUTF –Ready to Use Therapeutic Food

SAM - Sever Acute Malnutrition

TFC - Therapeutic Feeding Center

UNICEF – United Nations International Children Fund

WHO – World Health Organization

WHZ – Weight for Height Z-score

1 INTRODUCTION

1.1 Background

Malnutrition is the major health burden in developing countries. Apart from the two forms of protein energy malnutrition (marasmus and kwashiorkor); micronutrient deficiency such as iron, iodine, vitamin A and zinc are also manifestations of malnutrition and are estimated to affect more than two billion people globally (Priyanka et al.,2015;Luchou et al.,2013).

Despite tremendous advances in care for human immune-deficiency virus (HIV) infection and increased funding for treatment, morbidity and mortality due to HIV/AIDS in developing countries remains unacceptably high. A major contributing factor is that 1800 million people remain chronically undernourished globally, and the HIV epidemic largely overlaps with populations already experiencing low diet quality and quantity (*Louise et al., 2009*).

Malnutrition is a serious danger for people living with HIV/AIDS. Even at the early stages of HIV infection when no symptoms are apparent, HIV makes demands on the body's nutritional status. The risk of malnutrition increases significantly during the course of the infection (WHO, FAO, 2002).

People Living with HIV (PLHIV) taking ARVs and receiving associated treatments require special nutrition care and support because HIV-related medications can reduce the overall quality of health. Medications can cause nausea, vomiting, change in or loss of taste or appetite, and diarrhoea, all of which can lead to reduced absorption of nutrients and weight loss. Food by prescription (FBP): Food is prescribed in small quantities as a therapy to take home and consume. Health facilities are the best places for food by prescription (MOH, 2008).

Ready-to-use products are designed to be consumed directly and do not require preparation. These include lipid-based nutrient supplements (e.g. Nutributter™) and ready-to-eat biscuits. These products can be divided into two groups: Ready to-use therapeutic foods (RUTFs) and Ready-to-use supplementary foods (DFID,2012).

Ready to Use Therapeutic Foods (RUTFs) can be made with local ingredients to fit local taste preference, although most of the RUTF consumed today is made in Europe. An example is Plumpy'Nut, a mixture of milk powder, vegetable oil, sugar, peanut butter, and powdered vitamins and minerals produced by Nutriset in France (Frank et al., 2013).

Acceptability was assessed by measuring adherence to a take-home regimen of each product. If a child or adult consumed 50 percent or more of the intended dose of RUTF over the 2-week period, the product was considered acceptable. Children and adults were also asked which of the two products they preferred. Six organoleptic properties (color, smell, taste, texture, ease of swallowing, and difficulty of eating) were evaluated for both products by children and adults (Frank et al., 2013).

Ready-to-use therapeutic food' is a term that could be used generically to refer to any food known or reliably believed to have special benefits as therapy, in particular in cases of SAM. However, as now used, the term refers to a nutrient-dense and energy-dense peanut based paste originally designed primarily for the treatment of SAM in young children. Typical primary ingredients for RUTF include peanuts, oil, sugar, milk powder and vitamin and mineral supplements. It can be consumed directly by the child, and does not need to be mixed with water. Any child consuming RUTF will, however, need water in addition. It can be stored for three to four months without refrigeration, even at tropical temperatures (Latham et al., 2011; Marie-Pierre D, 2014).

The Ethiopia Food by Prescription (FBP) program, implemented by Save the Children US (SC US), USAID/Ethiopia, and the Ethiopian Ministry of Health since 2010, provides therapeutic food along with nutritional assessment and counseling to malnourished HIV+ individuals (Kate et al., 2012).

1.2 Statement of the problem

A recently developed home-based treatment for severe acute malnutrition could save the lives of hundreds of thousands of children a year. RUTF has been widely used and proven effective in Africa. However, it has not been universally taken up by other countries in the world. For example, some countries in Asia have been reluctant to accept externally produced therapeutic products (ACF, 2011).

Despite the patients' enthusiasm about their weight gain and rapid resumption of labor activities, the taste of the product, diet monotony and clinical conditions associated with HIV made it impossible for half of them to consume the daily prescription. Sharing the RUTF with other household members and mixing with other foods were common (Filippo et al., 2011).

Another report from Amhara region showed that, stunted children is 42%, 9.7% wasted and 27.9% are underweight (CSA,2016). A hospital based cross-sectional study done in Gondar referral hospital showed prevalence of malnutrition in adults living with HIV/AIDS (BMI<18.5kg/m²) found to be 27.8% (Belayneh et al., 2010).

1.3 Literature review

A clinical trial study done on RUTF in India to compared with legume based porridge showed that 58% and 77% children accepted RUTF and khichri eagerly (Vijay et al., 2015).

Another study from Vietnam on Acceptability of Two Ready-to-Use Therapeutic Foods among HIV Positive Patients showed that adults significantly preferred High-Energy Bar for Integrated Management of Acute Malnutrition (HEBI) than Plumpy 'Nut which is 79 percent vs. 21 percent respectively. Most of the adults' ratings of the organoleptic properties of each RUTF were similar across RUTFs. The only statistically significant difference was a more frequent rating of the texture of HEBI as "liked" and a more frequent rating of the texture of Plumpy'Nut as "disliked" ($p=0.0067$). The taste of HEBI was more frequently "liked" and less frequently "disliked" than the taste of Plumpy'Nut, but this difference was only marginally significant ($p=0.086$) (Frank et al.,2013).

The study conducted on Peanut-based ready-to-use therapeutic food: acceptability among malnourished children and community workers in Bangladesh. The report showed that, 60% expressed problems with PPN acceptability. Overall, 43% perceived the child's dissatisfaction with the taste, 31% with consistency and 64% attributed side effects to PPN (nausea, vomiting, loose motion, diarrhea, abdominal distension and pain) (Engy et al., 2013).

By Engy et al (2013) from Bangladesh on Peanut-based ready-to-use therapeutic food aimed to measure acceptability and tolerability among malnourished pregnant and lactating women. The finding showed that, majority at 78% found PPN unacceptable and only 22% women accepted PPN completely. Overall, 60% women found the PPN taste unacceptable while 43% found the smell unacceptable. In an attempt to compensate for the unacceptable taste and smell, 54% of women mixed PPN with water and that of 3% mixed it with other food. A total of 39% women reported at least one side effect

attributed to PPN, which included nausea (27%), vomiting (19%), diarrhea (8%), abdominal distension (7%) and abdominal pain (3%). Despite the mentioned limitations in PPN acceptability, 85% women perceived PPN to be beneficial as a therapeutic product for improving general health (Engy et al., 2013).

A study conducted in Niger on Intra-household use and acceptability of Ready-to-Use-Supplementary-Foods showed that 24.7% of households reported any sharing of RUSF within the household and 91% caregivers of under five age children reported that child's acceptability of RUSF (Sandra et al., 2012).

Another study done in Ghana on Acceptability of lipid-based nutrient supplements (LNS) among Ghanaian infants and pregnant or lactating women showed that 100 % found the color of the LNS-P&L acceptable and 87% found the odour acceptable (Seth et al., 2010).

A study conducted in South Africa on Nutritional quality of a ready-to-use food, and its acceptability to healthy and HIV-infected children receiving antiretroviral treatment showed that generally, more than 75% of the participants in both groups rated the product overall as “good” and more than 65% of the children liked the taste, smell and mouth feel (Wiles et al., 2014).

A study done in western Uganda showed that feeding the RUF to only the child enrolled in the program was a challenge to which 34 of 50 (68%) of respondents replied positively. Most participants reported high acceptability of the RUF, commenting that their child “likes the food so much” and “eats the food well” (Scott et al., 2012).

A facility-based, cross-sectional study in 34 facilities in Addis Ababa, from February to June 2013 using 600 HIV positive patients aimed to assess the adherence to the RUF. The result showed that only 36.3% adhered strictly to the prescribed doses of RUF (Masresha et al., 2014).

A cross-sectional descriptive study done in South Africa on acceptability and intake of lipid-pastes as a food supplement showed that 84% and 87% was acceptable to the supplement children and adult respectively (Steenkamp et al., 2013).

A study done in Kenya on the Evaluation of Food by Prescription Program Supplement Use among People Living with HIV/AIDS, in Gucha Sub-County in Kisii County from 149 participants smell of the food was not a problem 145 (97.3%) did not have a problem with the smell , on the color of the food 60 (40.3%) liked the color sometimes, 1 (0.7%) was not sure 23 (15.4%) did not like the color all the times and 65 (43.6%) liked the color all the times, and almost all the participants 145 (97.3%) liked the taste of the food under FBP program. This finding also showed that about the packing of the food which was 26 (17.4%) agreed that the packing was okay, 7 (4.7%) were not sure if the packing was okay, 50 (33.6%) did not like the packing all the times and the majority of the respondents 66 (44.3%) liked the packing all the times (Ongondi et al., 2016).

Conceptual framework

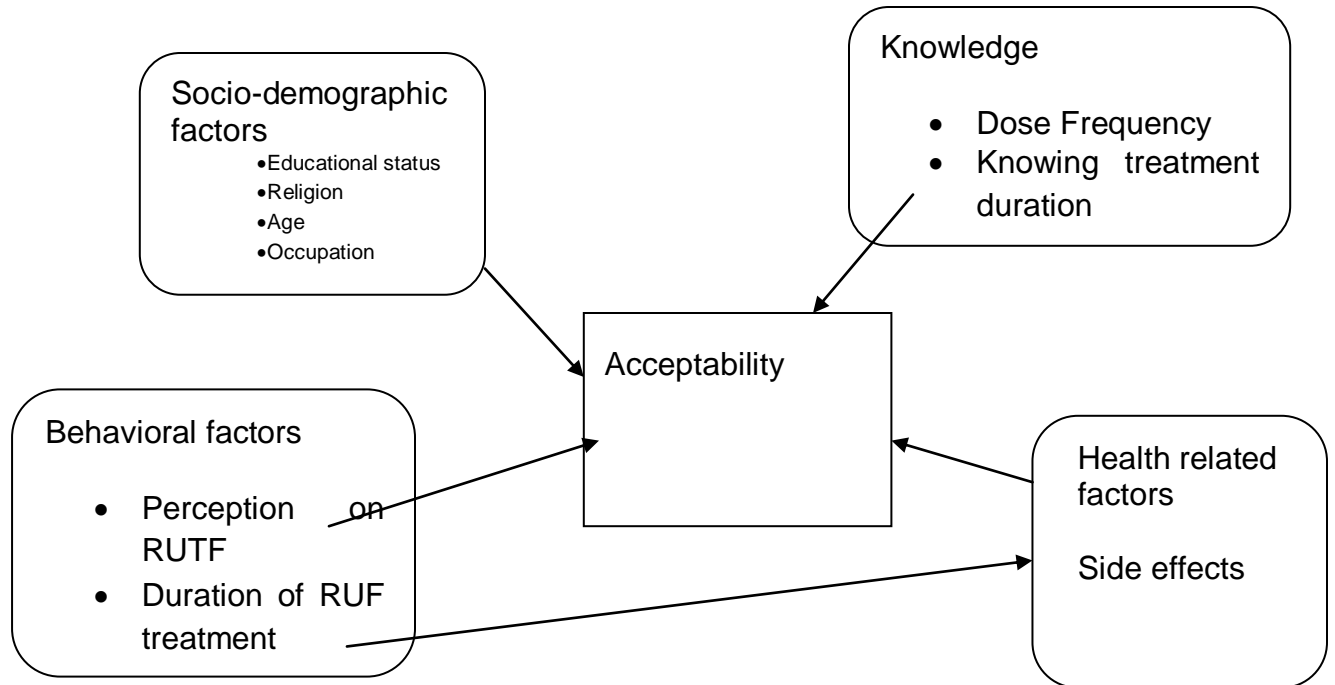


Figure 1. Conceptual framework on acceptability of RUTF

1.4 Justification

Ready to Use Food (RUF) was perceived and used as an effective treatment of Severe and moderate malnutrition. Even though patients know the benefit of RUF there are low level of acceptability due to undesirable taste and smell. More over unpublished report showed that there is product sharing and selling informally. Furthermore, there are adult ART clients who are on treatment for the prescribed duration of treatment has been defaulted. Partners are working to support AIDS clients whom they are known at risk of under nutrition using RUF, but not yet known if adults accept RUF. To the best of our knowledge there is no research done on acceptability of RUF by target beneficiaries in the study area and in the country at large. So this RUF Acceptability study can help to assess the program effectiveness and efficiency towards RUF.

2 OBJECTIVES

2.1 General objective

- To assess acceptability and associated factors of RUF among adult ART clients in Felegehiwot referral hospital

2.2 Specific objectives

- To assess the levels of RUF acceptance among adult ART clients in Felegehiwot referral hospital
- To identify associated factors with RUF acceptability among adult ART clients in Felegehiwot referral hospital

3 METHODS

3.1 Study design, area and period

3.1.1 Study design

Institutional based cross sectional study design was carried out from October one – November 30, 2016.

3.1.2 Study area and period

The study was conducted in Felegehiwot Referral Hospital, which is one of the referral hospitals in Amhara Regional state found in Bahir Dar capital of Amhara regional state. The hospital serves for more than six zones population which would be around seven million peoples. There were around Twelve thousand HIV positive clients who were started their treatment at Felegehiwot referral hospital of these six thousands was on Anti Retroviral Treatment (ARV) and six hundred thirty were taking ready to use food.

3.2 Population

3.2.1 Source population

The source populations for this study were all adult clients who are on ART in Felegehiwot referral hospital, Bahir Dar Ethiopia.

3.2.2 Study population

Study populations were all adult clients who were on ART and took RUF in Felegehiwot referral hospital Bahir Dar.

3.2.3 Sampling unit

The sampling units were those adult clients who were on ART and took RUF during the data collection period.

3.3 Inclusion and exclusion criteria

3.3.1 Inclusion criteria

Adult ART clients who were taking RUF at Felegehiwot Referral Hospital were included.

3.3.2 Exclusion criteria

Adult ART clients who had been taking RUF for the first time during data collection were excluded.

3.4 Sample size determination

The sample size was determined using single population proportion formula. Since there is no data on acceptability of RUF in Ethiopia we consider 50% proportion and this prevalence was used with 95% confidence level and 5% margin of error.

$$n = \frac{Z_{\alpha/2}^2 (p)(1-p)}{d^2}$$

n: Sample size

P: Proportion of acceptability of RUF

d : Margin of error

$$= \frac{(1.96)^2 (0.5)(1-0.5)}{(0.05)^2}$$

$$n = 384$$

By considering 10 % non-response rate

$$10\% \times 384 = 38$$

Then the final sample size was $n = 384 + 38 = \underline{422}$

3.5 Sampling technique and procedure

In Bahir Dar city administration Felegehiwot referral hospital was the only hospital which gave Ready to Use Food for ART clients. During the data collection period the clients on the other health facilities other than Felegehiwot referral hospital was insignificant to take proportionally and our study data were collected at this hospital. Clients on ART who took RUF are scheduled to take their medicine and RUF monthly

program based. Since the total clients were very few participants were recruited consecutively using purposive sampling during the data collection period from October to November until the final sample size.

3.6 Study variables

3.6.1 Dependent variables

Acceptability of RUF

3.6.2 Independent variables

Socio-demographic factors, behavioral factors, health related factors, knowledge factors and socioeconomic factors.

3.7 Operational definition

Acceptable: RUF was considered acceptable when five points hedonic scale became $\geq 80\%$ for the four sensory responses.

Unacceptable: RUF unacceptable was defined as when five points hedonic scale became $< 80\%$ for the four sensory responses (Wiles et al., 2014; Pillary et al., 2014).

Side effect: Is a common side effect like diarrhea, vomiting, nausea, abdominal distension and abdominal pain during the intake of RUF.

Ready-to-Use Food (RUF): Includes both RUTF and RUSF, which are nutrient dense foods packed in sachets.

Duration of treatment: The number of months in which a client stays in treatment of RUF.

3.8 Data collection procedure

Data from a single participant was collected with interviewer administered structured questionnaire during exit at private and convenient place for the participant. The structured questioner was used to collect socio-demographic data, perception of acceptability of the RUF, feeding RUF, side effect about RUF and general utilization on RUF (Annex: Questionnaire).

3.8.1 Data collection instrument

Data were collected using structured questionnaire by a face-to-face interviewing technique. The questionnaire was developed in English and then translated into Amharic, and participants were asked with the Amharic version of the questionnaire and finally, it retranslated into English.

3.8.2 Data collectors

Data collected by trained health professional students. A Health center and hospital staffs that are not providing the service recruited as supervisors. Data collectors and supervisors trained for one day prior to the data collection about the objective of the study and how the data was collected from respondents.

3.9 Data Measurement

An equally spaced five-point hedonic scale were used with ratings (5 = “very good”, 4 = “good”, 3 = “not good or not bad”, 2 = “bad” and 1 = “very bad”) was used to rate the RUF taste, smell, color and consistency (Wiles et al., 2014; Pillary et al., 2014). A decision was taken to reduce the overall RUF acceptability in to two categories of rating. A score ≥ 4 signified that the RUF was accepted by the participant, a score <4 taken as RUF overall unacceptable.

3.10 Data quality control

The data collection instrument was carefully prepared, pretested and modified based on the pretest result, data collectors were trained and there were close supervision. The data quality was assured by cross checking the coding, data entry problems and missing values were avoided.

3.11 Ethical considerations

Ethical clearance was obtained from the Ethical Committee of school of chemical and food engineering, Bahir Dar University. Official letters were given to ARHB and Bahir Dar city administration health department. Permission was obtained from the study area. Before enrolling any of the eligible study participants, the purpose and the benefits and

the confidential nature of the study was described for each participant, verbal informed consent was taken from each study, participants before the data collectors fill the questionnaire and participants had the right to stop at any time in between data collection or jump to answer some of the questions if they feel uncomfortable. Name and address of study participants were not written on the questionnaire.

3.12 Data management and analysis

During data collection and data entry, each questionnaire was checked for completeness and consistency. The data were coded, checked and entered into SPSS and analyzed by SPSS version 21 (1). Descriptive findings were described an association between dependent and independent variables was assessed by using both bivariate and multivariate logistic regression. Variables with p-value <0.2 in bivariate analysis entered into multivariate logistic regression and a p- value < 0.05 considered statistically significant.

3.13 Dissemination and utilization of the result

The result of this study was presented to the school of chemical and food engineering applied human nutrition program. Moreover, the finding will be presented in local and international conferences. Furthermore, the work will be published in reputable journals.

4 RESULTS

4.1 Socio Demographic Characteristics

A total of 420 adult ARV and RUF beneficiaries were interviewed with a 99% of response rate. Of these, 242 (57.6%) were female and 178 (42.4%) were male. About 42% were married and 31% were single and widowed was around 15%. Regarding Educational level 149 (35.5%) of participants were elementary school and 42 (10%) were college or university graduate. With regard to educational level Ninety five (22.6%) of respondents were daily laborer, 91 (21.7%) were student, 76 (18.1%) government employ and 57 (13.6%) were housewife. Most of the participants age group were between 35-44 years 126 (30%) followed by between 18-24years of age 99 (23.6%) (Table1).

Table 1: Demographic profile of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017

Socio-demographic characteristics		Frequency	Percent
Gender	Male	178	42.4
	Female	242	57.6
Marital Status	Married	177	42.1
	Single	130	31.0
	Widowed	64	15.2
	Divorced	49	11.7
Religion	Orthodox	377	89.8
	Muslim	34	8.1
	Protestant	9	2.1
Occupation	Government Employ	76	18.1
	Private Employ	41	9.8
	Merchant	51	12.1
	Student	91	21.7
	House Wife	57	13.6
	Daily Laborer	95	22.6
	Other	9	2.1
Education Status	Unable to Write and Read	84	20.0
	Only Read and Write	37	8.8
	Elementary (1- 8)	149	35.5
	Secondary School (9 - 10)	91	21.7
	Preparatory (11 - 12)	17	4.0
	College University	42	10.0
Age WHO Classification	18-24	99	23.6
	25-34	92	21.9
	35-44	126	30
	45-54	69	16.4
	55 - 64	34	8.1

4.2 Knowledge factors

Six questions were provided for participants in order to assess participant's knowledge about RUF. Accordingly three hundred three (72.1%) of participants provided that package of RUF is easy to open. Regarding the amount of 352(83.8%) had taken greater than two sachets of RUF per day and among participants only 198(47.1%) know for how long was their duration of treatment. According to the study half of participants 208 (49.5) had taken the RUF one month and 40 (9.5%) four months and above. Three hundred thirty nine (80.7%) participants know that RUF had been stored in appropriate storage place and the rest did not know to be stored in appropriate storage place in their household (Table 2).

Table 2: Knowledge factors characteristics of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017

Variables		Frequency	Percent
Package of RUF easy to open	Yes	303	72.1
	No	117	27.9
Package of RUF labeling clear	Yes	225	53.6
	No	195	46.4
Number of Sackets taken per day	Less than two	68	16.2
	Greater than two	352	83.8
Knowing their Duration of treatment with RUF	Yes	198	47.1
	No	222	52.9
For How long do you take this RUF (months)	One month	208	49.5
	Two month	75	17.9
	Three month	97	23.1
	4 month & above	40	9.5
Storage of RUF in the household	Not in appropriate storage place	81	19.3
	Appropriate storage place	339	80.7

4.3 Health related factors

According to this study 344(81.9%) of the participants had no problems when they took RUF for their treatment but 76(19.1%) said that they had side effect of nausea and vomiting. Three hundred sixty eight (87.6%) participants said that the health professionals counsel them about the utilization of ready to use food. From all participants 314(74.8%) were said that appetite taste was not done when they entered into the program only 106(25.2%) said that appetite taste was done (Table 3).

Table 3: Health related factors characteristics of adult ART clients who took RUF in Felegehiwot Referral hospital, Ethiopia, 2017

Variables		Frequency	Percent
Problems when taking RUF	nausea	56	13.3
	vomiting	20	4.8
	no	344	81.9
Health professionals counseling about RUF utilization	Not	52	12.4
	Yes	368	87.6
Appetite taste is done when entering to the program	Yes	106	25.2
	No	314	74.8
	Total	420	100

4.4 Behavioral factors

Four hundred twelve (98.1%) participants stated that the package of RUF was attractive and only 8(1.9%) said that the package was not attractive. About 396(94.0) had eaten the RUF by sucking. According to this study 187(44.5%) believed that the RUF had eaten by all people but 233(55.5%) believed that the RUF did not eaten by all people. From the participants 310(73.8%) ate RUF only, 85(20.2%) ate the RUF mixed with other foods (Table 4).

Table 4: Behavioral factors characteristics of adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017

Variables		Frequency	Percent
Package of RUF attractive	Yes	412	98.1
	No	8	1.9
Eating RUF by Sucking	Yes	396	94.3
	No	24	5.7
Do you believe RUF is eaten by all people	Yes	187	44.5
	No	233	55.5
Eating RUF only	only RUF	310	73.8
	With water	25	6.0
	mixed use	85	20.2
Total		420	100

4.5 Five point hedonic scale for acceptability of RUF

According to this study 88(21%), 183(43.6%), 132(31.4%) and 17(4%) of participants said the taste of RUF was very good, good, not good/not bad and bad respectively. From all the participants 106(25.2%) said the smell was not good/not bad, 144(34.3%) good and 103(24.5%) very good and the rest was bad and very bad. Ninety four (22.4%) of the participants said that the color of RUF was very good, 171(40.7%) good, 112(26.7%) not good/not bad 43(10.2%) bad. From this study participants were said that the consistency of the RUF was 8(1.9%) very bad, 41(9.8%) bad, 83(19.8%) not good/ not bad, 205(48.8%) good and 83(19.8%) very good (Table 5).

Table 5: Five point hedonic scale for acceptability of RUF on adult ART clients who took RUF in Felegehiwot referral hospital, Ethiopia, 2017

Sensory characteristics for acceptability of RUF	Five point hedonic scale for acceptability of RUF				
	Very bad	Bad	Not good/Not bad	Good	Very Good
Taste	0	17	132	183	88
Smell	9	58	106	144	103
Color	0	43	112	171	94
Consistency	8	41	83	205	83

4.6 Acceptability of RUF

Of the total of 420 RUF surveyed populations, 294 (70%) accepted RUF completely and 126(30%) had refused either because of the unpleasant taste, smell unattractive color or consistency. About 96% of the participants accepted the taste and 84% accepted the smell and 64.8% reported no side effects (Table 6).

Table 6: *Measures of Ready to use food acceptability, Felegehiwot referral hospital, Ethiopia, 2017.*

Variables used to measure	ready to use food	Frequency	Percentage
RUF Over all Acceptability	Unacceptable	126	30
	Acceptable	294	70
RUF Side effect	Unacceptable	148	35.2
	Acceptable	272	64.8
RUF Taste	Unacceptable	17	4
	Acceptable	403	96
RUF Smell	Unacceptable	67	16
	Acceptable	353	84
RUF Consistency	Unacceptable	43	10.2
	Acceptable	377	89.8
RUF Color	Unacceptable	49	11.7
	Acceptable	371	88.3

4.7 Factors associated with ready to use food acceptability

Bi-variant and multivariable analysis was done to see the associated factors for the acceptability of ready to use food by participants. On the bi-variant analysis package of RUF labeling, appetite taste, number of Sackets taken, duration of treatment with RUF, how long on treatment, RUF has eaten by all people, side effects, storage, health professional counseling, religion, occupation, marital status and age category were with p-value < 0.2. From the above factors 4 remains as a factor in multivariate analysis and 9 of them lost their significance. The finding showed that, who know their duration of treatment showed significant difference in acceptability compared with that did not know their duration of treatment; $P < 0.000$. According to this finding participants who said that the health professionals gave counseling was more likely accepted the RUF than did not get counseling (AOR: 0.041; 95% CI: 0.006-0.303; P-value: 0.002). From this finding currently married were more likely accept than currently unmarried (AOR: 4.29; 95% CI: 1.52-12.12; P-value: 0.006). Compared with RUF smell acceptability and unacceptability the RUF smell acceptable was more likely accept the overall RUF acceptability than RUF smell unacceptable (AOR: 81.79; 95% CI: 8.23-813.15; P-value: 0.0000) (Table 7).

Table 7. Logistic regression analysis showing the association of RUF acceptability with different variables

Variables		RUF Overall Acceptability			
		Acceptable	Unacceptable	COR (95%CI), P	AOR (95% CI)P-value
Gender	Male	127	51	1.12(0.73-1.7)	0.61
	Female	167	75	1	
Age WHO Classification	Age 18-34	115	76	0.42(0.28-0.65)	0.0000
	Age ≥35	179	50	1	
Marital Status	Currently Married	130	47	1.33 (0.87-2.04)	0.19
	Currently Unmarried	164	79	1	4.29(1.52-12.12)0.006*
Package of RUF labeling clear	Yes	150	75	0.71(0.46-1.08)	0.11
	No	144	51	1	
Appetite taste done	Yes	64	42	0.56(0.35-0.88)	0.013
	No	230	84	1	
How long do you take this RUF (months)	One month	157	51	3.92 (0.0000)	
	Two month	33	42	1.01(0.97)	
	Three month	73	24	0.89(0.79)	
	Four month and above	31	9	1	
Health Professional counseling	Not say any thing	43	9	2.23(1.05-4.72)	0.04
	Counsel about RUF	251	117	1	0.041(0.006-0.303)0.002
Package RUF easy to open	Yes	212	91	0.99(0.62-1.58)	0.98
	No	82	35	1	
Know their Duration of treatment	Yes	115	83	0.33(0.22-0.52)	0.000
	No	179	43	1	0.012(0.002-0.066)0.00

5 DISCUSSION

This study illustrates that despite a participants had some problems associated with taking ready to use food (19.1%) there is over all acceptability 70% of ready to use food. An important limitation of the study is that adult who were lost-to-follow-up could during the data collection period was not included. The study did not include anthropometric measurements and qualitative methods like depth interview and focused group discussions will require further research.

Ready to use food ready to use therapeutic food (Plumpy nut) and ready to use supplementary food (Plumpy sup) are recommended for malnutrition treatment. The study revealed that the overall acceptability of RUF was 70%. In the area where malnutrition is one of the major public health problems like Ethiopia, RUF service is a life saving provision that improve treatment outcome and quality of life. The finding of this study raise a number of important considerations related to RUF acceptability. Acceptability of peanut-based RUTF in the few published studies has been variable. There was good acceptability in study done at South Africa (Steenkamp et al., 2013) on the acceptability and intake of lipid-based pastes as a food supplement was 87% but this was poor among community workers in Bangladesh (Engy et al., 2013) which was 22% and among HIV patients in Vietnam (Frank et al., 2013) the acceptability was 60%. This might be due to socio cultural factors and health education given at health facilities and different manufacturer and ingredients use.

In this study, taste and consistency had a higher acceptability; 96% and 89.8% respectively. There was no data in Ethiopia regarding it. When we compared to the study done in Bangladesh (60%) our study showed a much higher acceptability of RUF taste (Engy et al., 2013) but when we compared to the Kenya study (97.3%) ours showed lower acceptability of RUF taste (Ongondi et al., 2016). This may be due to nutritional and disease status of the patients on organoleptic characteristics which affects the taste of ready to use food.

And on its smell acceptability these study reveals that 84.0% of the participants are acceptable while in Bangladesh study (43%) found the smell unacceptable. From all the

participants 64.8% only have said no attributed side effect but in the Bangladesh study 39% of the participants of the study were reported at least one side effect attributed to PPN, which included nausea 27%, vomiting (19%), diarrhea (8%), abdominal distension (7%) and abdominal pain (3%) (Engy et al., 2013).

In this study most of the participants liked the attractiveness of the RUF package (98.1%) which is higher than the study done in Kenya, which was only (44.3%) of study participants liked the package at all times (Ongondi et al., 2016).

6 CONCLUSION AND RECOMMENDATION

The observed level of acceptability to the ready to use food was low and the major contributory factors identified were: knowing their duration of treatment, health professional counseling and marital status.

As a recommendation there should be adherence counseling on ready to use food advantage in order to increase its acceptability on people living with HIV. There should be a further study on its acceptability and use both on adults and children on qualitative bases.

REFERENCES

- Priyanka, P., Anita, K. (2015). Nutritional Intervention to Combat Malnutrition among Children under the Age of Five. *International Journal of Health Sciences & Research*, 5(2), 374-380.
- Luchuo, E.B., Paschal, K.A., Ngia, G., Njem, PK., Yelena, S., Nsah, B., Ajime, T.T. (2013). Malnutrition in Sub – Saharan Africa: burden, causes and prospects. *Pan African Medical Journal*, 15,120.
- Louise, C.I., Kimberli, A.C., Kenneth, A.F., Steven, B., Jenifer, C., Patric, W. (2009). HIV/AIDS, Undernutrition, and Food Insecurity. *CID:49 HIV/AIDS*.
- WHO. .FAO. (2002). *Living well with HIV/AIDS a manual on nutritional care and support for people living with HIV/AIDS*.
- MOH. (2008). *National Guidelines for HIV/AIDS and Nutrition in Ethiopia*.
- DFID. (2012). *Human Development Resource Centre: The use of nutrition products for the prevention and treatment of undernutrition*.
- Frank, T.W., Nga, T.T., Mai-Anh, H., Matthew, B., Zeina, MM., Thuc, T.ML., Minh, T.HL., et al. (2013). *Acceptability of Two Ready-to-Use Therapeutic Foods among HIV-Positive Patients in Vietnam*. Washington, DC: FHI 360.
- Latham, M.C., Jonsson, U., Sterken, E., Kent, G. (2011). Ready-to-use therapeutic food RUTF stuff. Can the children be saved with fortified peanut paste? *World Nutrition*, 2(2), 62-85.
- Marie-Pierre, D.(2014). *Production of Ready-to-Use Food (RUF): An overview of the steps and challenges involved in the “local” production of RUF.*; Available from: www.cmamforum.org. [Accessed date 10/8/2016].
- Kate, S., Elizabeth, B., Beatrice, R., Jennifer, C., Shibani, G., Yitbarek, K., Devica, S., et.al. *Measuring the Impact and Cost-Effectiveness of Prescribed Food on Recovery from Malnutrition and HIV Disease Progression among HIV+ Adult Clients in Ethiopia*

A partnership study between Tufts University and Save the Children US in Ethiopia for USAID/FBP, 2012.

ACF.(2011). Putting nutrition products in their proper place in the treatment and prevention of global acute malnutrition.

Filippo, D., Paluku, B., Isabelle. L.G., Saul, G., David, M., Andrew, S. (2011). A qualitative investigation of adherence to nutritional therapy in malnourished adult AIDS patients in Kenya. *Public Health Nutrition*, 15(2),316-323.

Central Statistical Agency (CSA).(2016).Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia.

Belaynew,W., Kebede,Y., Yibrie,A. (2010). Nutritional status of adults living with HIV/AIDS at the university of Gondar referral hospital, Northwest ETHIOPIA. *Ethiopian Journal of Health and Biomedical Science*. 3(1),12.

Vijay, D.W., Bhawesh, R.D. (2015). Ready to Use Therapeutic Food: An Overview. *Advances in Life Sciences and Health*,2(1).

Engy, A., Rony, Z., A D., W VD., Z S., T A., Petra, A. and et als.(2013). Peanut-based ready-to-use therapeutic food: acceptability among malnourished children and community workers in Bangladesh. *Public Health Action*. 3(2),8.

Engy, A., Rony, Z., Zubair, S., Marcel, M., Tajmary, A., Petra, A., Malik, A., and et als. (2013). Peanut-based ready-to-use therapeutic food: how acceptable and tolerated is it among malnourished pregnant and lactating women in Bangladesh. *Maternal and Child Nutrition*.8.

Sandra, C., Caroline, M., Susan, S., Valerie, C., Celine, L., Franck, A., Kevin, P. and et als. (2012). Intra-household use and acceptability of Ready-to-Use-Supplementary-Foods distributed in Niger between July and December 2010. *Appetite*,59,9.

Seth, A.F., Anna, L., Mamane, Z., Kathryn, G.D. (2010). Acceptability of lipid-based nutrient supplements (LNS) among Ghanaian infants and pregnant or lactating women. *Maternal and Child Nutrition*.

- Wiles, N.L., Mahlangu, Z.N., Siwela, M., Veldman, F.J. (2014). Nutritional quality of a ready-to-use food, and its acceptability to healthy and HIV-infected children receiving antiretroviral treatment. *S Afr J Clin Nutr*, 27(4),6.
- Scott, B.I., Stephanie, B.J., Jennifer, A.M., Linda, S.A., Harsha, T., Sudhanshu, H., Margaret, E.B. and Alice, S.A. (2012). Examination of facilitators and barriers to home-based supplemental feeding with ready-to-use food for underweight children in western Uganda. *Matern Child Nutr*, 8(1),22.
- Masresha, A.K., Jemal H.(2014).Factors influencing adherence to the food by prescription program among adult HIV positive patients in Addis Ababa, Ethiopia: a facility-based, cross-sectional study. *Infectious Diseases of Poverty*, 3(20),10.
- Steenkamp, L., Lategan, R. (2013). Acceptability and Intake of lipid based, South African Journal of Clinical Nutrition, 26(3), 150-151.
- Ongondi, E.N., Ayodo G., Adoka S. (2016). Evaluation of Food by Prescription Program Supplement Use among People Living with HIV/AIDS, in Gucha Sub-County in Kisii County. *Jornal HIV Retrovirus*, 2 (2),19.
- Pillay, K., Siwela, M., Veldman, F.J., Amonsou, E.O., Mabaso, B.P. (2014). Acceptance of a ready-to-use supplementary food by stable HIV-treated and HIV and tuberculosis. *South African Journal Clinical Nutrition*,27(1), 31-37.

ANNEXES

Consent form

My name is Muhabaw Teshome; I am MSc student in Applied Human Nutrition in BDU. Currently I am conducting a research entitled “*Acceptability and associated factors for RUF among Malnourished Adult Beneficiaries in Felegehiwot Referral Hospital, North-West Ethiopia*”.

The main aim of this research is to know the acceptability and associated factors for RUF among malnourished adult beneficiaries in Felegehiwot Referral Hospital , north-west Ethiopia .If you are agreed to participate in the study, you will give us about 10 minutes to answer the questions. Confidentiality of results will be maintained. Your participation is very good for the community but you could not participate; stop at any time in between data collection or jump (decline) to answer some of the questions if they feel uncomfortable. Therefore, your participation is purely on voluntary and did not associate with the service you are getting and will get. There is no payment for you or you will not ask any money by participation in the study.

Have you agreed to participate in the research? A. Yes B. No

Thank you very much!!

English Questionnaire

Questionnaires for Malnourished Adult beneficiaries Interviewed at the end of service provided at Hospital or Health Center.
Date: /.... /2016 Name of interviewer: _____

Section I: Demographic Information

S.No	Question	Response	Skip to
SI. 1.	Age	-----years	
SI. 2.	Gender	1. Male 2. Female	
SI. 3.	Marital status	1. Single 2. Married 3. Widowed 4. Separated	
SI. 4.	Religion	1. Orthodox 2. Muslim 3. Catholic 4. Protestant 5. Other, specify-----	
SI. 5.	Occupation	1. Government employ 2. Private employ 3. Merchant 4. Student 5. Housewife 6. Other, specify-----	
SI. 6.	Education level	1. 1. Unable to read & write 2. 2. Only read and write	

		3. 3. Elementary (1-8)	
		4. 4. Secondary school (9-10)	
		5. 5. Preparatory (11-12)	
		6. 6. College / University	

Section II: Perception of RUF Acceptability

S.No	Question	Response	Skip to
SII. 1.	How do you like the taste of the paste for you?	1. Very bad 2. Bad 3. Not good/Not bad 4. Good 5. Very good	
SII. 2.	How do you like the smell of the paste for you ?	1. Very bad 2. Bad 3. Not good/Not bad 4. Good 5. Very good	
SII. 3.	How do you like the consistency of the paste for you?	1. Very bad 2. Bad 3. Not good/Not bad 4. Good 5. Very good	
SII. 4.	How do you like the color of the paste for you?	1. Very bad 2. Bad 3. Not good/Not bad 4. Good 5. Very good	

Section III. Feeding with RUF

S.No	Question	Response	Skip to
SIII. 1.	Is the RUF package easy to open? sucking is advisable	1. 1. Yes 2. 2. No	
SIII. 2.	If not, what is the difficult?		
SIII. 3.	Is the package attractive for you?	1. Yes 2. No	
SIII. 4.	If not, what to be improved?		
SIII. 5.	Is sucking the RUF comfortable for you?	1. Yes 2. No	
SIII. 6.	If not what do suggest about the formulation of RUF to be comfortable?		
SIII. 7.	Do you understand the instructions on the package?	1. Yes 2. No	
	If not, what is the difficult?		
SIII. 8.	How did you eat RUF mostly? <i>(more than one answer is possible)</i>	1. Paste 2. Mixed with water 3. Mixed with other food 4. Other <i>Specify-</i> -----	
SIII. 9.	If participant answer number 1		Skip to Q 11

SIII. 10.	If he or she did not eat the paste, what do you think are the reasons? (<i>more than one answer is possible</i>)	1. Does not like the paste taste 2. Too sweet 3. Too salty 4. Does not like the consistency 5. Does not like the smell 6. Has abdominal distension or gas 7. Other , Specify-----	
SIII. 11.	Is appetite test done for you before the enrollment in the program?	1. Yes 2. No	
SIII. 12.	How many sachet of RUF do you take per day?	1. ≤ 2 2. > 2	
SIII. 13.	Do you know the duration of treatment?	1. Yes 2. No	
SIII. 14.	For how long do take this RUF?	1. One month 2. Two months 3. Three months 4. Four month and above	
SIII. 15.	Do you believe all people can	1. Yes	

	take these RUF?	2. No	
SIII. 16.	If no whom can take these RUF?		
SIII. 17.	Is there any family member taking these RUF before?	1. Yes 2. No	
SIII. 18.	If yes who was taking RUF?	1. Child 2. Husband 3. Wife 4. Other, specify- --	
SIII. 19.	Have you missed taking your RUF?	1. Yes 2. No	
SIII. 20.	If yes for how many days you miss?	-----days	
SIII. 21.	What is the reason for missing?	-----	

Section IV. Side effects of RUF and other disease information

S.No	Question	Response	Skip to
SIV. 1.	Have you noticed any particular problems when you have/had eaten RUF?	<ol style="list-style-type: none"> 1. Yes 2. No 	
SIV. 2.	If yes, what kind of problems you noticed? (<i>more than one answer is possible</i>)	<ol style="list-style-type: none"> 1. Nausea 2. Vomiting 3. Diarrhea 4. Abdominal distension 5. Abdominal pain 6. Other, Specify----- 	
SIV. 3.	<i>What measures do you take for the above side effects?</i>	<ol style="list-style-type: none"> 1. Eat other foods 2. Eat small amount frequently 3. Take medicines 4. Other, specify----- 	
SIV. 4.	What disease you have other than HIV and malnourished?	<ol style="list-style-type: none"> 1. TB 2. Hypertension 3. Diabetics 4. Other, specify----- 	

Section V. General RUF utilization

S.No	Question	Response	Skip to
SV.1.	Where do you store your RUF in your household?		
SV. 2.	Why you do not shared the RUF that is prescribed for you to the other household members?		
SV. 3.	If his or her response is I have shared the RUF? For whom it is shared?	1. 1. Children Under 5 2. 2. Older age 3. 3. Sick family member 4. 4. Other, Specify -----	
SV. 4.	Have you seen the RUF in local shop?	1. 1. Yes 2. 2. No	
SV. 5	If yes how much is sold one sachet of RUF	--	
SV. 6.	If yes to Q.3 what was the main reason?	---	
SV. 7.	What is your opinion about the selling of the RUF or consumption by other persons?	-----	
SV. 8.	What the health professionals counsels you about the RUF utilization.		

የስምምነት መግለጫ ቅጽ

ስሜን ማህበራዊ ተሾመ እባላለሁ በባህር ዳር ዩኒቨርሲቲ በስነ-ምግብ ትምህርት የሁለተኛ ዲግሪ ተማሪ ነኝ። የምስራቅ የጥናት ርዕሰ በፈለገ ህይወት ሪፈራል ሆስፒታል በምግብ እጥረት በተጎዱ አዋቂ ተጠቃሚዎች በስሎ ስለተዘጋጀ ምግብ ዙሪያ ላይ ያለ ተቀባይነት እና ተዛማጅ ጉዳዮች ነው።

የጥናቱ ዓላማ በፈለገ ህይወት ሪፈራል በምግብ እጥረት በተጎዱ አዋቂ ተጠቃሚዎች በስሎ ስለተዘጋጀ ምግብ ዙሪያ ላይ ያለውን ተቀባይነት እና ተዛማጅ ጉዳዮችን ማወቅ ነው።

በዚህ ጥናት ለመሳተፍ ፈቃደኛ ከሆኑ ጥያቄዎችን ለመመለስ 10 ደቂቃ ይፍቀዳል።

የእርስዎ ተሳትፎ ለህብረተሰቡ በጣም ወሳኝ ነው ነገር ግን በጥናቱ ያለ መሳተፍ፤ በጥያቄው መሃል ማቋረጥ ወይም ያልተመቻቸውን ጥያቄ የመዘለል መበተዎ የተጠበቀ ነው። ስለሆነም የእርስዎ ተሳትፎ በራስዎ መሉ ፈቃደኝነት ላይ ያተኮረ እና ከሚሰጠው አገልግሎት ጋር ምንም አይነት ተያያዥነት የለውም። በዚህ ጥናትም ስለተሳተፉ የሚያገኙት ልዩ ጥቅም የለም የሚጠየቁት ገንዘብም የለም።

በጥናቱ ለመሳተፍ ፍቃደኛ ነዎት?

አዎ

አይደለሁም

ስለፈቃደኝነትዎ አመሰግናለሁ፡ -

አማርኛ መጠይቅ

በስሎ የተዘጋጅ ምግብ ተጠቃሚ ለሆኑ አዋቂዎች አገልግሎታቸውን ካገኙ በኋላ የሚጠየቁት መጠይቆች

ቀን : / / 2009 ቃለ መጠይቁን የሚጠይቀው ሰው ስም: _____

ክፍል 1: ማህበራዊ ሁኔታን በተመለከተ

ተ.ቁ.	ጥያቄ	መልስ	ምርመራ
ክ 1. 1.	እድሜ	-----ዓመት	
ክ 1. 2.	ጾታ	1. ወንድ 2. ሴት	
ክ 1. 3.	የጋብቻ ሁኔታ	1. ያገቡ 2. ያላገቡ 3. የትዳር ጓደኛቸው የሞተ 4. ከትዳር ጓደኛቸው የተለያዩ	
ክ 1. 4.	ሀይማኖት	1. ኦርቶዶክስ 2. መስሊም 3. ፕሮቴስታንት 4. ሌላ ይገለጹ ---	
ክ 1. 5.	ስራዎ ምን ድን ነው	1. የመንግስት ስራተኛ (ተቀጣሪ) 2. የግል ድርጅት ተቀጣሪ 3. ነጋዴ 4. ተማሪ 5. የቤት እመቤት 6. ሌላ ይገለጹ ---	
ክ 1. 6.	የትምህርት ሁኔታ	1. ያልተማረ : ማንበብና መጻፍ	

		<p>የ ማይችሉ</p> <p>2. ማን በብ እና መጻፍ የ ማይችሉ</p> <p>3. አንደኛ ደረጃ ትምህርት ያጠናቀቁ (1-8)</p> <p>4. ሁለተኛ ደረጃ ትምህርት ያጠናቀቁ (9-10)</p> <p>5. መሰናዶ ትምህርት ያጠናቀቁ (11-12)</p> <p>6. ኮሌጅ ወይም ዩኒቨርሲቲ ያጠናቀቁ</p>	
--	--	--	--

ክፍል 2: በስሎዩ ተዘጋጀ ምግብ/መድሃኒትን በተመለከተ ያለ አመለካከት

ተ.ቁ.	ጥያቄ	መልስ	ምርመራ
ክ2.1.	በስሎዩ ተዘጋጀው ምግብ/መድሃኒት ጣዕሙ እንዴት ነው?	<ol style="list-style-type: none"> 1. በጣም መጥፎ ነው 2. መጥፎ ነው 3. መካከለኛ ነው 4. ጥሩ ነው 5. በጣም ጥሩ ነው 	
ክ2.2.	በስሎዩ ተዘጋጀው ምግብ/መድሃኒት ሽታው እንዴት ነው?	<ol style="list-style-type: none"> 1. በጣም መጥፎ ነው 2. መጥፎ ነው 3. መካከለኛ ነው 4. ጥሩ ነው 5. በጣም ጥሩ ነው 	
ክ2.3.	በስሎዩ ተዘጋጀው ምግብ/መድሃኒት ወፍረት ተስማሚ ነው?	<ol style="list-style-type: none"> 1. በጣም አይስማማም 2. አይመችም 3. መካከለኛ ነው 4. ጥሩ ነው 5. በጣም ጥሩ ነው 	
ክ2.4.	በስሎዩ ተዘጋጀው ምግብ/መድሃኒት መልኩ እንዴት ነው?	<ol style="list-style-type: none"> 1. በጣም ደስ አይልም 2. አይመችም 3. መካከለኛ ነው 4. ጥሩ ነው 5. በጣም ጥሩ ነው 	

ክፍል 3. በስሎዩ ተዘገጀውን ምግብ/ መድሃኒት አመጋገብ በተመለከተ

ተ.ቁ.	ጥያቄ	መልስ	ምርመራ
ክ 3.1.	በስሎዩ ተዘገጀው ምግብ/መድሃኒትን ፓኬጅ ለመክፈት ቀላል ነው?	1. አዎ 2. አይደለም	
ክ 3.2.	አይደለም ከሆነ, ምኑ ነው ያስቸገረው?		
ክ 3.3.	ፓኬጁ ላይ ሲያዩት ይስባል	1. አዎ 2. አይደለም	
ክ 3.4.	አይደለም ከሆነ በምን መልኩ ቢሆን ይመርጣሉ		
ክ 3.5.	በሚመጠጥ መለኩ መውሰዱ ተመቸቶ ያልታለ	1. አዎ 2. አልተመቸኝም	
ክ 3.6.	አልተመቸኝም ከሆነ በምን መልኩ ቢዘጋጅ ይላሉ		
ክ 3.7.	በፓኬጁ ላይ ያለው መመሪያ ለመረዳት ግልፅ ነው?	1. አዎ 2. አይደለም	
ክ 3.8.	አይደለም ከሆነ, ምኑ ነው ግልፅ ያልሆነው?		
ክ 3.9.	በስሎዩ ተዘገጀውን ምግብ / መድሃኒት እንዴት ነው የሚመገቡት? (ከአንድ በላይ መመለስ ይቻላል)	1. ብቻውን 2. ከውሃ ጋር በማቀላቀል 3. ከሌላ ምግብ ጋር በማቀላቀል 4. ሌላ ካለ፣ ይግለጹ-----	
ክ 3.10.	መልሱ 1 ከሆነ		ወደ ጥያቄ

			ቁጥር 11
h 3.11.	ብቻውን ካልሆነ የሚመገቡት ምክንያቱ ምንድን ነው ይላሉ? (ከአንድ በላይ መመለስ ይቻላል)	<ol style="list-style-type: none"> 1. ጣዕ መን ባለ መውደድ 2. በጣም ጣፋጭ በመሆኑ 3. በጣም ጨውጨው ስለሚል 4. ወፍረቱን ባለ መውደድ 5. ሽታውን ባለ መውደድ 6. ሆድ የመንፋት ፀባይ ስላለው 7. ሌላ ካለ , ይገለፅ ----- 	
h 3.12.	ወደ ፕሮግራሙ ሲገቡ የምግብ ፍላጎት መከራ ተስርቶለዎታል (አንዲቀምሱ ተደርጓል)	<ol style="list-style-type: none"> 1. አዎ 2. አልተስራልኝም 	
h 3.13.	በቀን ምን ያህል ሳቸት ነው የሚወስዱት	<ol style="list-style-type: none"> 1. < 2 2. > 2 	
h 3.14.	ለምን ያህል ጊዜ እንደሚወስዱ ያውቃሉ	<ol style="list-style-type: none"> 1. አዎ 2. አላውቅም 	
h 3.15.	በስሎ የተዘጋጀውን ምግብ / መድሃኒት ለምን ያህል ወር ወስደዋል?	<ol style="list-style-type: none"> 1. ለአንድ ወር 2. ለሁለት ወር 3. ለሶስት ወር 4. ለአራት ወር እና ከዚያ በላይ 	
h 3.16.	ማንኛውም ሰው ይወስደዋል ብለው ያምናሉ	<ol style="list-style-type: none"> 1. አዎ 2. አይደለም 	

	አይደለም ከሆነ ለአን ማን ነው የሚታዘዘው		
ከ 3.17.	ከቤተሰብ ወሰን ጥካሁን በፊት በዚህ የታከመ አለ	1. አዎ 2. የለም	
ከ 3.18.	መልሱ አዎ ከሆነ ማን ነበር የታከመው	1. ልጅ 2. ባል 3. ማሰት 4. ሌላ ካለ ይገለጹ	
ከ 3.19.	ሳይመገቡ ረስተውት ያውቃሉ	1. አዎ 2. የለም	
ከ 3.20.	ከረሱ ለምን ያህል ቀን	-----ቀን	
ከ 3.21.	ለመርሳት ምክንያቱ ምን ነበር	-----	

ክፍል 4. በስሎዩ ተዘጋጀውምግብ / መድሃኒት የጎንዮሽ ባህሪያቶችና የሌሎች በሽታዎች መረጃ

ተ.ቁ.	ጥያቄ	መልስ	ምርመራ
ክ 4.1.	በስሎዩ የተዘጋጀውን ምግብ / መድሃኒት በማመገብ በብት ወቅት ያጋጠመዎት የተለየ ችግር አለ?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
ክ 4.2.	መልሰዎ አዎ ከሆነ ምን አይነት ችግር ነበር የታየበዎት?	<ol style="list-style-type: none"> 1. ማቅለሽለሽ 2. ማስታወክ 3. ተቅማጥ 4. ሆድ መንፋት 5. ሆድ ቁርጠት 6. ሌላ ካለ, ይገለጹ ----- 	
ክ 4.3.	ከላይ ለታዩት ችግሮች ምን አይነት መፍትሄ ይወስዳሉ?	<ol style="list-style-type: none"> 1. ሌላ ምግብ መመገብ 2. ጥቂት ጥቂት መመገብ 3. መድሃኒት መስጠት 	
ክ 4.4.	ከምግብ እጥረት ሌላ በሽታ ያለዎት ምን ድን ነው?	<ol style="list-style-type: none"> 1. ቲቢ 2. ደም ግፊት 3. ስኳር 4. ሌላ ካለ, ይገለጹ ----- - 	

ክፍል 5. በስሎስለ ተዘጋጀውምግብ/ መድሃኒት አጠቃቀምን በተመለከተ አጠቃላይ መረጃ

ተ.ቁ.	ጥያቄ	መልስ	ምርመራ
ከ 5.1.	በቤት ውስጥ ምን ዓይነት ቦታ ላይ ነው የሚያስቀምጡት?		
ከ 5.2.	በስሎ የተዘጋጀውን ምግብ/ መድሃኒት ከሌሎች የቤተሰብ አባላት ጋር በጋራ ለምን አይጠቀሙም?		
ከ 5.3.	መልሱ በጋራ እንጠቀማለን ከሆነ ፣ ከማን ጋር ነው የሚጋሩት?	1. ከአምስት አመት በታች ከሆኑ ህፃናት 2. ከአረጋውያን 3. ከታመሙ የቤተሰብ አባል 4. ሌላ ካለ, ይገለጹ ----- --	
ከ 5.4.	በስሎ የተዘጋጀውን ምግብ/ መድሃኒት ሱቆች ላይ አይተውት ያውቃሉ?	1. አዎ 2. የለም	
ከ 5.5.	መልሱ አዎ ከሆነ አንድ ሳኬት በስንት ብር ይሸጣል?	-----	
ከ 5.6.	ለጥያቄ ቁጥር 3 መልሱ አዎ ከሆነ ፣ ምክንያቱን ቢገልጹልን?	-----	
ከ 5.7.	በስሎ ስለተዘጋጀውን ምግብ/ መድሃኒት በመሸጡ እና ሌሎች ሰዎች መብላታቸው ላይ ምን አስተያየት አለዎት?	-----	
ከ 5.8.	በስሎ ስለተዘጋጀው ምግብ/ መድሃኒት ባለ መያዝ ምን ምን ይመክሯችኋል?	----	