PREVALENCE OF MODERN CONTRACEPTIVE DISCONTINUATION AND ASSOCIATED FACTORS AMONG WOMEN IN REPRODUCTIVE AGE (15-49) IN KOMBOLCHA DISTRICT, EAST HARARGE ZONE, OROMIA REGION, ETHIOPIA.

MPH THESIS

ABEBAYEHU GIRMA HAILE (BSC)

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PREVALENCE OF MODERN CONTRACEPTIVE DISCONTINUATION AND ASSOCIATED FACTORS AMONG WOMEN IN REPRODUCTIVE AGE (15-49) IN KOMBOLCHA DISTRICT OF EAST HARARGE ZONE, OROMIA REGION, ETHIOPIA.

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Abebayehu Girma Haile (BSc)

College: Health and Medical Science

School: Public Health

Program: Reproductive Health

Major Advisor: Dr. Lemessa Oljira (PhD, Assistant Professor)

Co-advisor: Dr. Tadesse Alemayehu (PhD, Assistant Professor)

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HARAMAYA UNIVERSITY, HARAR

APPROVAL SHEET

HARAMAYA UNIVERSITY

POSTGRADUATE PROGRAM DIRECTORATE

I hereby certify that I have read and evaluated this thesis,**" Prevalence of Modern Contraceptive Discontinuation and Associated Factors among Women in Reproductive Age (15-49) In Kombolcha District, East Hararge Zone, Oromia Region, Ethiopia. "**By ABEBAYEHU GIRMA. I recommend that it will be submitted as fulfilling the thesis requirement.

Major Advisor

Dr. Lemessa Oljira (PhD, Associate Professor) _____ _____

Signature Date

Co-Advisor

Dr. Tadesse Alemayehu (PhD, Associate Professor) _____ _____

Signature Date

As a member of the Board of Examiners of MPH Thesis Open Defense Examination, I certify that I have read and evaluated the thesis prepared by ABEBAYEHU GIRMA and examined the candidate. I recommend that the thesis be accepted as fulfilling the thesis requirement for the master degree of reproductive health.

_____	_____	_____
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Date: _____
School/Department: School Of Public Health/reproductive Health

Bibliographical Sketch

My name is Abebayehu Girma Haile. I was born in Harar town. I started school in Babile as elementary student and I continued my high school education in Harar. I then went to Bale Goba for a diploma program in health science. Following my stay in Bale Goba for 3 years I have served East Hararge Zone in Melka Belo District. Later on I joined Haramaya University collage of Health and Medical Sciences where I earned my BSc degree. Having received my Degree in BSC I continued to serve the zonal Health office in Jarso and Kombolcha districts including the Zonal Health office with passion and dedication. Soon after my first degree I planned and started education in Haramaya University post graduate school while still serving the zonal health office as a department Head.

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ABBREVATIONS AND ACRONYMS

AOR	Adjusted Odds Ratio
BSc	Bachelor of Science
CI	Confidence Interval
CPR	Contraceptive Prevalence Rate
CSA	Central Statistical Agency
DHS	Demographic Health Survey
EDHS	Ethiopia Demographic Health Survey
FMOH	Federal Minister of Health
FP	Family Planning
GC	Gregorian calendar
HC	Health Center
HO	Health Officer
HP	Health Post
HSTP	Health Sector Transformation Plan
IUCD	Intra Uterine Contraceptive Devise
KM	Kilometer
MCU	Modern contraceptive users
RHR	Reproductive Health and Research
SPSS	Statistical Package for Social Science
SRS	Simple Random Sampling
USAID	United States Agency for International Development
WHO	World Health Organization

Abstract

Background: A persistent use of contraceptive methods beyond the assumption of reproduction control also has an ultimate effect in reduction of pregnancy-related morbidity and mortality. Although, studies have shown the prevalence of contraceptive discontinuation among women in reproductive age of different districts (towns) in Ethiopia range from 23% to 65%, almost all have been focused on single method type and therefore this study show the overall contraceptive discontinuation status of women in reproductive age in Kombolcha district, Oromia region, Ethiopia.

Objective: To assess prevalence and its' associated factors of contraceptive discontinuation among women in reproductive age in Kombolcha district, Oromia, Ethiopia in from March 21-30/ 2019.

Methods: Community based quantitative cross sectional study design was conducted from March 21-30/2019. Multi-stage stratified sampling technique was used to recruit 814 study participants. Pretested structured questionnaire was used to collect data from participants through face-to-face-interview. Data was entered to Epidata-3.1 and analyzed by SPSS-23. Descriptive statistics was used to describe characteristics of study participants. Possible associations and statistical significance between variables was measured using crude and adjusted odds ratio, P value <0.05 and 95% CI was used to declare statistical significance.

Results: The overall magnitude of modern contraceptive discontinuation was 37.46% with (95% CI: 34.2, 40.7). The highest discontinuation was for the injectable 170(56.3%). Contraceptive discontinuation among women who didn't have husband support were more than 3 times than those who have husband support [AOR=3.43; 95%CI: (1.41, 8.36)]. Women who did not counseled prior to the service were 9.2 times more likely to discontinue [AOR = 9.17; 95%C.I: (5.37, 15.68)]. Women who took decision to use family planning independently were 6.6 times more likely to discontinue than who have joint decision [AOR =6.6; 95%C.I: (2.61, 16.72)]. Women who had method inconvenience were also 11 times more likely to discontinue [AOR= 11.06; 95%C.I: (4.91, 24.9)].

Conclusion: The magnitude of modern contraceptive discontinuation is still high. Which is associated with lack of counseling prior to family planning service and couples mutually exclusiveness. Thus, service provider should adhere to counseling standard and teaching aids and then avert misconceptions, rumour and fears related to side effects and others. Male partners should be actively encouraged to take role in family planning program.

Keywords: Contraceptive, discontinuation, associated factors, Kombolcha district, Ethiopia.

1. INTRODUCTION

1.1. Background

Contraceptive discontinuation, is defined as starting contraceptive use and then stopping for any reason while still at risk of an unintended pregnancy. Discontinuation for reasons other than wanting to become pregnant contribute to unwanted fertility and can lead to pregnancies that may be terminated through unsafe abortion. Not all discontinuation is necessarily problematic.(Castle and Askew, 2015).

Contraceptive methods, services and use helps women and couples to monitor their reproduction /fertility/, through their ways to delay, space or limit and have a planned pregnancy. Besides it also enables them to attain the desired number of children by preventing unintended pregnancy, which was have an ultimate reduction on pregnancy-related morbidity and mortality (Kavanaugh and Anderson, 2013). So the FP program should focus on modern contraceptive methods that refers to contraceptive drugs and devices which are highly effective in preventing pregnancy (Kavanaugh and Anderson, 2013; Health(FMOH), 2011; CSA and ICF, 2016).

Many women discontinue contraceptive use within one year of initiating a method. The one-year probability of discontinuing the use of FP decreased from 48.9 percent in 1997 to 39.7 percent in 2007 but in 2009 rose to 45.1 percent. More than half of the women using injectable, male condoms, and oral contraceptives discontinued use of their method within one year. The IUD had the lowest discontinuation rate; 15 percent of women discontinued its use within a year. (USAID, 2011).

The major reasons that women discontinue use of a contraceptive method are a desire to become pregnant (34.7%), method failure (causing unintended pregnancy)-17.1%, desire for a more effective method (12.6%), side effects (11.5%), and health concerns(9.4%). Reasons for contraceptive discontinuation have changed in recent years, with more women stopping contraceptive use in order to increase fertility from 2007 to 2009, while the proportion of those citing method-related reasons declined. (USAID, 2011)

According to a study done in India to assess discontinuation in contraceptive use in rural areas of Peshawar, the contraceptive discontinuation rate was 27.5%. The discontinuation were observed mainly within first year of contraceptive use (87%). Multiple factors underlay discontinuation

of contraceptives and are specific to each society, which can provide a foundation for the development of policies and programs that could more effectively address the obstacles to practice family planning.(Najma, 2004)

Despite increase in modern contraceptive use most of world countries, including Ethiopia, even Oromia region, have been reluctant and leftover from addressing contraceptive discontinuation (United Nations, 2015); (Macro., 2001, ICF, 2016, (CSA and ICF, 2016).

1.2. Statement of Problem

Contraception is one of the most visible and demanding part of a woman's SRH concern as far they are exposed to the risk of unintended pregnancy over much of their lives. Introduction of modern contraceptive methods is responsible for most of the global fertility decline over the last 50 years – fallen by more than 50% since 1950. The other economic consequence of contraception is associated with women's employment and an increase in their earnings, healthier and better educated children, and an increased proportion of people of working age. (Laanpere, 2015)

When a couple discontinues using family planning, even for a brief period, the woman may become pregnant unintentionally. Similarly, when a woman wants to limit or space births but is not using contraception, she runs the risk of becoming pregnant unintentionally. In both situations, these unintended pregnancies often lead to larger-than-intended family sizes and contribute to higher rates of overall fertility.(USAID, 2011).

Reasons for discontinuation vary by women (couple) background and contraceptive method. Desire for another child is stated as a reason for stopping in the first year of use by only 6% of women, though by the end of the third year of use 23% have discontinued for this reason. Similarly, only 8% stop use in 12 months because they have no further need for contraceptive protection. For the four modern methods, reported failure is rare, varying between 1% for IUDs and 8% for condoms.(WHO and /RHR/, 2012)

More than 225 million women, who are married or at least sexually active, and who do not want to have pregnancy or not have intention to be pregnant; while are not using any effective contraceptive method, those are considered as an unmet need are found in developing countries. As a result of these unmet needs, around 74 million and 290,000 of the whole women face unintended pregnancies and maternal deaths respectively. Thus, per year around three million newborn deaths were happening (Singh et al., 2014). According to a community based cross sectional, and quantitative and qualitative study conducted in elsewhere in Oromia region, more than one third (36.5%) of pregnancies in the community were unintended, out of which 25.3% wants to have baby later, while 11.2% wants no more birth. The major reasons for failure to avoid unintended pregnancy were: side effects plus fear of it and problem to get method 38.6% and lack of knowledge and contraceptive method failure shares 31.5% (Teshome et al., 2014).

A comparison of the results of researches done across the country, in relation to contraceptive discontinuation rate and its associated factors highlights the country-specific area, contraceptive

and factor patterns that are anomalous which may merit researcher attention. Data of Episodes discontinued within 12 month; from ((CSA), 2016) reveal a total discontinuation rate (for all reasons) of 35%, which 70% of the pill user, and 38% of contraceptive injections user. The desire to become pregnant and method related side effect are the main reasons. Unlikely, the community based cross sectional study done in Jijiga and Jimma town (Shiferaw and Mekonen, 2018, Yideta ZS, 2017) showed that 19% and 11.5% contraceptive discontinuation rate. However, pill users (30% and 60% respectively) are the dominant to discontinue like the 2016, EDHS result.

Even though some studies on contraceptive discontinuation were done in Northern and Southern Ethiopia, almost all focus on specific contraceptive method, which makes the result not to have a comprehensive information for decision. These studies have not been systematically collated and also have a huge variance in their yield of prevalence of contraceptive discontinuation, which range from 23.4% in Dale district of Southern Ethiopia (Abreham and Achamyelesh, 2018) up to 65% in Debre Tabor town, Northwest Ethiopia (Asaye, Nigussie and Ambaw, 2018). The aim of this study was to develop Kombolcha district profile report that provides a comprehensive view of the current contraceptive discontinuation status and related factors among women who have started contraception method within the preceding three years. The overall goal was to identify, generate, communicate and use a robust body of research-based evidence for the development of more effective plan and program for family planning services.

1.3. Significance of the study

The primary beneficiaries of this study are believed to be women in the reproductive age group and are in the course of using modern contraceptive methods. It helps them to identify the determinant factors that could possibly result in discontinuation.

Findings of this study are believed to guide and help decision makers, health program planners, health professionals and partners and stakeholders working at all levels (especially at district). Identification of factors associated with contraceptive discontinuation is essential to guide program planning, implementation, monitoring and evaluation of feasible interventions through providing recommendations and suggestions.

It also help other researchers and/or nongovernmental partners who want to conduct further research and intervene accordingly. Thus, this study is aimed to determine the magnitude of contraceptive discontinuation and its associated factors among women in reproductive age and who initiated contraception method within the preceding three years, in Kombolcha district in 2019.

1.4. Objective

1.4.1. General Objective

- ✓ To assess contraceptive discontinuation rate and associated factors among women in reproductive age and who are initiated on contraception methods within the preceding three years in Kombolcha district, Oromia region of Eastern Ethiopia, March, 21-30 2019.

1.4.2. Specific Objectives

1. To asses magnitude of contraceptive discontinuation among women in reproductive age and who are initiated contraception method within the preceding three years and live in the district.
2. To identify factors associated with contraceptive discontinuation among women in reproductive age and who are initiated contraception method within the preceding three years and live in the district.

2. LITERATURE REVIEW

2.1. Overview of Contraceptive discontinuation

The level and trend of modern contraceptive use have been increasing throughout the world, similarly the analysis of six sub-Saharan African countries more than three times DHS data confirms that prevalence of modern contraceptive increased from three to six folds, and particularly rapid change in the use of injectable (Jacob, 2011). But, more than 33% of women stop using before celebrating the first one year of use, and over 50% discontinue before reaching two years use of modern contraception method. The choosing of method discontinuation may be related to different contextual reason, which predispose for risk of unwanted pregnancy or may be wanted one (Castle and Askew, 2015).

In the cross sectional study conducted on 2011 in nine districts of Sindh and Punjab Provinces, Pakistan indicated that overall before one year IUCD use discontinuation rate is about 12.3%, and 18% for prior to two years discontinuation. Of which, the average time (month) of IUCD use before discontinuation was 7.4 (SD ± 5.8) (Azmat et al., 2012, Waqas Hameed et al., 2015). The other similarly designed study conducted at Buffalo city in the Eastern Cape Province, South Africa, revealed that, Implanon removal time ranges from one to thirty-six months after initiation, mean duration of 11.2 (SD=±7.1) months. Almost two third (67.3%) of participant removed the implanon in the first year of use, while 94.4% had removed up to the second year (Mrwebi et al., 2018).

The median duration of use of any method in the 19 countries was 20 months, ranging from a low of 12 months in Bangladesh to a high of 47 months in Ukraine. A wide range in the dynamics of contraceptive use is observed. On average, 38% of women discontinue using reversible methods by the 12th month, 55% by the 24th month and 64% by the 36th month in the 19 countries. The lowest 12-month discontinuation was noted for the intrauterine device (IUD; 13%) and the highest was for the condom (50%), while the pill, injectable, periodic abstinence and withdrawal were discontinued by about 40% of users within the first 12 months of use. Which also maintained at 24 and 36 months and the distinct behavior of IUD users (Ali et al., 2012).

But, study conducted in 2014, Agarfa district, Bale zone, South East Ethiopia; the magnitude of modern contraceptive discontinuation was dropped to 25.5%. Among the major methods, the highest discontinuation rate was for the injectables (67.2%), followed by the pills (27.4%). In

contrast, implants had a discontinuation rate of just 4.0%. The median duration of use before stopping the method was 10 months with minimum 3 and maximum 72 months. From the total discontinuation rate the highest was in the early time (within 1 year period) around twenty percent, whereas beyond one year and above rate of discontinuation was 5.8% (Bekele et al., 2015). With consistence result to the Agarfa study, urban community based cross sectional study conducted in Humera town, northern Ethiopia; has come with the magnitude of contraceptive discontinuation for all methods were found as 27.1% (Belete N. et al., 2018).

Unlikely, a Cross Sectional study done in Debre Markos Town, Northwest Ethiopia stated that among the discontinuers, 10.5% discontinued within 6months, 23.9% within 12months 46.5% within 36months (Siyoum et al., 2017). Which shows an incremental change of discontinuation rate as the time elapsed. This result is somewhat similar to the, cross sectional study done in Mekelle City, Tigray, Ethiopia (G/Medhin Ts. et al., 2019) which have a finding result of early implanon discontinuation of 38% and the 2016 EDHS (CSA. et al., 2016) finding of 35%.

2.2. Factors Associated with Contraceptive Discontinuation

Even though there are different determinants that hinder a persistent use of modern contraceptive in relation to personal and environmental situation; However most findings suggest that underlying variation in motivation to avoid pregnancy is an important factor in contraceptive discontinuation (O'Fallon and Speizer, 2011, Curtis et al., 2014). So that may be grouped in the following way:

2.2.1. Socio demographic factors

Secondary cross-sectional 2011 data used study done in Bangladesh, demonstrated that women in age 25–29 years and 30–34 years group are significantly more often (OR =0.84 and 0.71, respectively) discontinued use of contraceptives. The analysis suggested that rural community women were about 2 times more likely to discontinue modern contraceptive use relative to the urban community women. However, respondents aged 25–34 years old were more likely to have discontinued compared with respondents aged less than 20 years (Mahumud et al., 2015). But the impact of marital separation on stopping of contraceptive use was less than 1 percent (0.9%) (Mitra, 2016).

In regarding to marital status of the women, the community based cross sectional study conducted in reproductive age group women of Jimma Town, Southwest Ethiopia, in 2013 result confirmed

that, divorced women were more than 2.5 times more likely to discontinue than women who have marriage or live with partner (Shiferaw and Mekonen, 2018, Yideta ZS, 2017). This is also true for study done in St. Louis City, Washington DC, which have had single and divorced,/separated and widowed women were slightly more likely to discontinue compared to married women with AOR of 1.26 and 1.62 respectively. Even though, discontinuation rate varied depending on the type of method that women were using and awareness they have (Grunloh DS. et al., 2014).

As the level of education increased it has an impact on method choice and use. Thus, decrease rate of failure and abandonment. But enhance risk of contraceptive switch as a result it influences discontinuation. Women in Bangladesh, with no formal education or illiterate were 1.5 times more likely to have discontinued their modern contraceptive use relative to those who had completed higher education. Although women with the highest level of education are 55% more at risk to switch methods as compared with the uneducated, those most probably abandon the contraceptive. (Alvergne et al., 2017)

2.2.2. Obstetric and Behavior related factors

Likely, information and counselling service quality also have the same effect on discontinuing the contraceptive use of other continent, like Bangladesh. As the result of the study 11.4% of women discontinue because they felt the methods inconvenient to use. Among the rest of the discontinuers, 8.8 percent discontinue for infrequent sex, 6.1 percent discontinued because of husband living away and another 2.6 percent because of discomfort; So this all be alleviated or minimized through an extensive awareness creation on the gaps identified (Mitra, 2016).

The other behavior related barrier to contraceptive continuation adhered to create the fear of a woman's contraceptive use being found out by her husband or someone else disapproval. (Alvergne et al., 2017). Meaning those who didn't have husband support during family planning use, either to limit or space number of children want to have. Based on this definition, the community based cross sectional study done in Humera town, northern Ethiopia showed that, participants who were in lack of husband support were almost 13 times more prone to discontinuing contraceptive (Belete N. et al., 2018). Similarly, study in Uganda also confirmed that absence of partner support had double the risk of getting short duration of birth interval (less than 2 years) due to the poor contraceptive use and adherence, which is relevant to husband disapproval and male dominance in these study settings (Muhindo R. et al., 2015).

According to the community based cross sectional study conducted in 2014 Agarfa district, Bale zone, South East Ethiopia; women who use modern contraceptive based on the decision of husband, rather than a mutual decision, have three times more likely to discontinue (Bekele et al., 2015). That is why 7.7% of modern contraceptive users, especially IUCD users discontinued due to their husbands' dislike or in-laws opposition (Waqas Hameed et al., 2015)

Since family planning is an issue concerning the natural reproduction of both couples, the role and responsibility attained by both is determinant and affects the rate of discontinuation. Here it is evident that lack of mutual decision has a negative impact over the sustainable use of the methods resulting in undesirable outcome. Partner support will deserve informed mutual decision in every aspect of fertility, through pursuable communication. Hence, women would be empowered to deliberately select a particular contraceptive method, resolve any perceived or/and encountered side effect, to use contraceptive and ensure continuation(Mohammed A. et al., 2014).

2.2.3. Information and counselling service related factors

As stated in the qualitative and quantitative study done elsewhere in Ethiopia. Which identified the presence of limitation in the providers counseling about the available methods and possible side effects. That 9% of the clients did not get any information at their first visit for FP. 16% of the mothers had not counseled on any anticipated side effects of the method. That almost 13% of prohibition to persistent use of family planning was strictly related to rumors, limited in access and husband disapprovals (Bekele et al., 2015).

Most factors discussed in the behavior and method related section are primary related with the information that clients have, and the quality of counseling service provided (Mitra, 2016). In spite of this, the study in northern Ethiopia revealed that in average 43.2% – 90.5% of women have ever heard about contraceptives before using it. Generally, during the uptake of contraceptive method nearly three quarter of the clients (71.7%) have got counseling. However, only 9% of them a full content of counseling (benefit (59.4%), effectiveness (38.5%), duration of action (37.3%) and only 9.0% about side effects). As a result of these, women who developed side effects, women who weren't appointed for follow up, and women who weren't satisfied by the service given, were more than two to three times more likely to discontinue as compared their counter parts for each context (Birhane et al., 2015).

Whereas a cross sectional studies done in Debre Markos town, Northwest Ethiopia (Siyoum et al., 2017) and Dale District, Southern Ethiopia (Nageso A. and A, 2018), showed that women who did not get counselling service were 1.2 and 1.93 times more likely to discontinue using family planning than those who have got the counselling service, respectively. In general, these studies have been shown that routine health information and quality counseling were the vital components for sustainable use of family planning service. Which would be affected by the lack of training and preparedness of the health workers (family planning provider) as shown in both Debre Markos and Dale district study.

2.2.4. Method related Factors.

In the analysis and search of any gap that dissatisfy and make unmet need of women should focus on the change process of contraceptive use; continuation, switching and failure, and should be taken as a marker. Although contraception discontinuation is multi-faceted, according to more than 19 DHS data reviewed by WHO have demonstrated that method-related reasons (side-effects, health concerns, medical advice, problems of access and availability, desire to switch to a permanent method, inconvenience of use and cost) associated with the use of hormonal contraceptives are major causes for discontinuation; method failure (i.e. the respondent became pregnant while using the method); a desire to become pregnant; no further need (i.e. sexual abstinence due to illness or marital dissolution); In a review of oral contraceptive discontinuation in 19 developing countries, found that the dominant reason for terminating oral contraceptive use within 12 months is dissatisfaction with the method, predominantly side-effects and health concerns. These account for a median of 28% (Ali et al., 2012).

This even also seen in single contraceptive method based studies. Likely, study on implanon discontinuation, confirms that side effect was the dominant reason for discontinuation with share of 71.3%. While, method failure, desire for more pregnancies and method inconvenience have 5.3%, 4.3% and 3.2% contribution respectively for the discontinuation (Mrwebi et al., 2018). Similarly, a cross sectional study done in Pakistan on the assessment of IUCD discontinuation, in 2012 showed that women who had developed side effects and result in health problem were 4.2 times more likely to discontinue using contraceptive method, nearly half (49.8%) of the respondents cited health concerns (including excessive bleeding, pain and irregular bleeding) as the main reason for their discontinuation, followed by desire for more children at 193 (34%).

Method failure (4.9%) and switching to other method (3.3%) were also contribute as the reasons for IUCD removals (Azmat et al., 2012). A community based cross sectional study done in Ofla district, Tigray, Northern Ethiopia (Birhane et al., 2015) revealed that women who have developed side effects were 2.8 times more likely to discontinue as compared to women who didn't developed side effect. Which had confirmed that, development of side effect during the use of family planning has been found to be associated with discontinuation.

Improvements in accessibility and quality of family planning service could have been found to decrease the likelihood of method inconvenience much more when compared with previous results. It is so important to have any information regarding inconvenience of family planning method that women deal with for anyone concerned with family planning. So, the result of further analysis of 2014 Cambodia DHS, which focus on contraceptive discontinuation, failure, and switching has revealed that, women who had method related /method inconvenience were 6.8 times more likely to discontinue than their counter (Wang and Hong, 2017.). However, the 2016 EDHS report found that six percent share of all method discontinuation was related to method inconvenience (CSA. et al., 2016), which is too much lower than the Cambodian DHS. This also holds true for study done in United states (Jennifer J. Frost, 2007).

Due to the variable nature and application of contraceptive methods, women are usually provided with a type of options. The higher the women has a knowledge in family planning option, the more she uses a suitable one. This majorly explained by method switching. Based on this the result of cross sectional study done in Bangladesh from July up to December, 2011 (Mahumud et al., 2015) revealed that nearly two fifth women ever discontinued any type of contraceptive method were switched to other methods of family planning. However, the 2016 EDHS report revealed that, the prevalence of all contraceptive method switching was around ten percent(CSA. et al., 2016), which is too much lower than Bangladesh study.

According to this review, different literatures (Mitra, 2016, Bekele et al., 2015, Birhane et al., 2015) revealed that, significant proportion of the peoples know the method they use. However, very few peoples use the method, which is CPR of less than 29% in many sub-Saharan Africa countries(United Nations, 2015). Even though there was an improvement of CPR in Ethiopia from year to year, there is almost no change in the rate of contraceptive discontinuation. (Macro, 2001; Health (HSTP), 2015 ;(CSA), 2016)). This unchanged national discontinuation rate has its own

impact for the nation to attain the sustainable development goal regarding to universal access to reproductive health service, reduction of infant mortality and maternal mortality.

2.3. Conceptual framework

Different independent variables was be used to examine factors influencing status of modern contraceptive discontinuation. The independent variables are grouped into socio-demographic, obstetric and behavioral, method related, and information and counseling factors.

Fear of Side effects, desired more effective method, inconvenience to use, desire for pregnancy, method failure, FP method selected, information and counseling during FP service, number of children, husband support, frequency of sex, and decision on number of children and method used, independent variables are assumed to affect continuation of modern contraceptive.

The selected seventeen independent variables, in relation to their affection on the outcome, were sub grouped into three domains. The conceptual framework was constructed based on the reviewed literatures and finally presented as in the way shown below in figure 1.

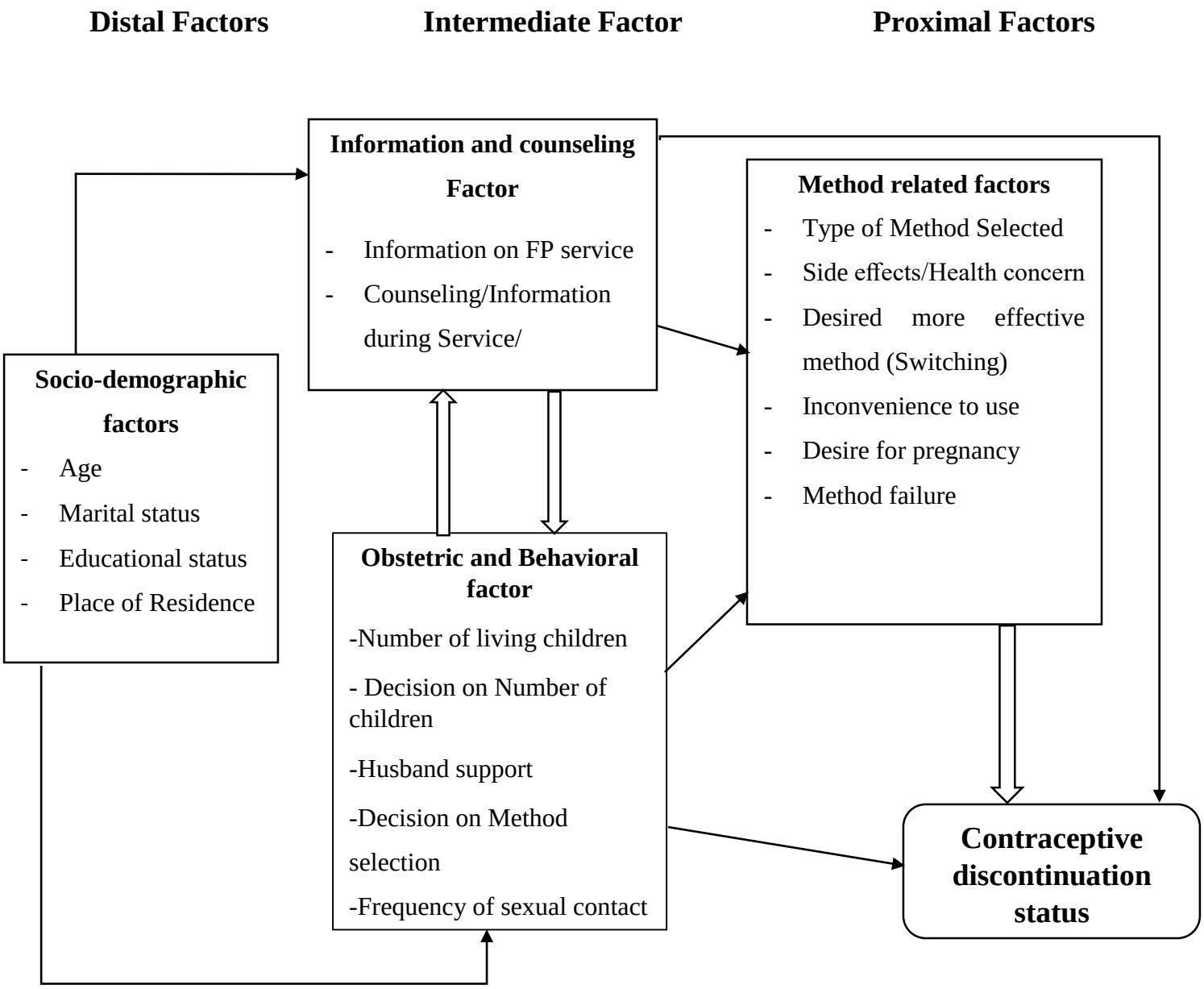

Figure 1: Conceptual framework shows factors related with modern contraceptive discontinuation among women in reproductive age (15-49)

Constructed from the literature reviewed

3. METHOD AND MATERIAL

3.1. Study area and period

This study was conducted in Kombolcha district, East Hararghe Zone, Oromia region from March 21-30, 2019. Kombolcha is one of 24 districts in East Hararghe Zone; located at 541 KM from Addis Ababa in east and 16KM from Harar town in north direction respectively. The district is bordered by Haramaya district in West, by Jarso district in East, by Dire-Dawa town in north and Harar town in south direction. Administratively, it has 22 kebeles (19 are rural and three are urban) in 2018. (Kombolcha Woreda Health Office, 2018)

As per 2007 population projection, it had 195,256 total populations in 2018 (2011 EFY), of whom, Males are 99,005 and Females are 96,251 with total households of 40,678. Reproductive aged (15-49) and pregnant women are 42956 and 6,775, respectively. Potential health service coverage of the district is about 89% with functional five primary healthcare units 24 health posts and 19 private clinics in 2018. In all kebele there was at least one health post that provide all modern contraceptive except the non-reversible and IUCD method. (Kombolcha Woreda Health Office, 2018)

3.2. Study design

Community based cross-sectional study was employed

3.3. Source population

All women in reproductive age (15-49) group who were started an episode of modern contraceptive method and resident in Kombolcha district

3.4. Study population

All women in reproductive age (15-49) who started an episode of modern contraceptive method within the preceding three years, lived in the study select kebeles for at least 6 months and present during data collection period.

3.5. Eligibility criteria

3.5.1. Inclusion criteria

All women in reproductive age (15-49) who were initiated modern contraceptive method within the preceding three years, and used it for at least three months duration and who were living in the selected kebeles for at least 6 months was included.

3.5.2. Exclusion criteria

Mentally ill, critically sick and unable to respond (unable to hear and/or speak) to questions during data collection/ interview was excluded.

3.6. Sample size determination

The sample size for this study was determined by ***Stat-calc*** module of Epi-Info 7.1.3; using single population proportion formula for first objective and using double population proportion formulas with equal samples for second objective. Then, two different sample sizes calculated, and also compared and largest sample size was selected and used accordingly.

For first objective: a single population proportion formula was used. Prevalence of contraceptive discontinuation among modern contraceptive users, is taken from EDHS 2016 report. Which have a summery contraceptive discontinuation result of; 35% (ICF, 2016), and margin of error=5%, 95% CI and design effect of two was be used.

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

Where: n = required sample size

$\left(Z_{1-\alpha/2}\right)$=critical value for normal distribution at 95% CI. Which equals to 1.96 (z value at alpha = 0.05)

p = proportion = 35% (.35)

d = absolute precision (margin of error) = 5% = 0.05

$$n = \frac{(1.96)^2 \times 0.35(1-0.35)}{(0.05)^2}$$

n = 350 × by 2 (design effect) n = 700

After considering 10% non-response rate, 770 study participants were required in this study.

For second objective: predictors of Contraceptive discontinuation were considered to estimate its minimum sample size and certain parameters listed below were taken from similar previous studies done elsewhere in Ethiopia (Bekele et al., 2015). Finally, predictor with largest sample size was selected to be used as a minimum sample size for this objective (Table 1)

Table 1: Sample size determination for the study on prevalence and factors associated with modern contraceptive discontinuation among women in reproductive age (15-49) in Kombolcha district, Eastern Ethiopia, 2019.

Predictors	**P2 (%)**	**AOR**	**1-β (%) Power**	**α (%)**	**CI (%)**	Initial samples			Design effect(×2)	10% non-response	Final sample size	Rank
						Exposed	Unexposed	Total				
Method Failure (Yes)	14.4	3.24	80	5	95	95	275	370	740	74	814	1st
Partner disapproval	20	2.76	80	5	95	55	159	214	428	43	471	

After computing two different sample sizes, the largest one was selected. Thus, a minimum of 814 women were selected and used in this study; sample size for second objective.

3.7. Sampling procedure/technique

A multi-stage stratified sampling technique was used for the selection of the study units. In the study area, there were three urban and 19 rural kebeles. Additionally, eight rural and three urban kebele (total of 11 kebele) which were found near (adjacent) to health centers and more favorable for easily access to the modern contraceptive service and information. Based on this, 1 kebele from urban, and 5 kebele from rural, which 2 of them were from near and 3 from out of the 5km range kebeles were randomly selected. The sample size was distributed to each kebele, proportionally depending on their number of women who have history of modern reversible contraceptive use; which was identified from registration and family folder. Finally, after calculating the sampling interval (k- value), based on the number of identified households with women in reproductive age who have history of modern contraceptive use, participants were selected by systematic random sampling technique with k^{th} interval. Volunteer local guiders were used to show the selected participant house for data collectors to avoid confusion.

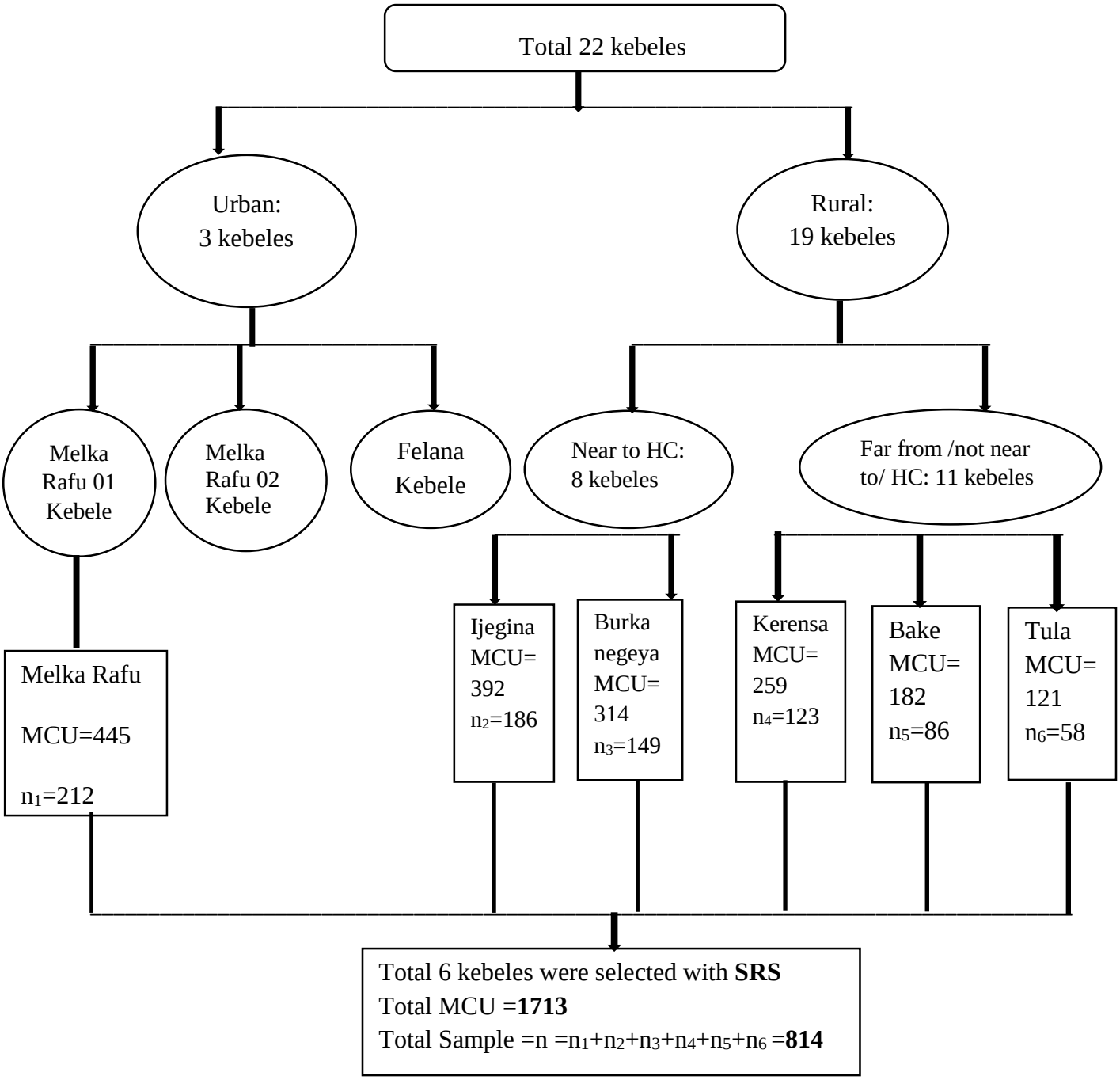

Figure 2: Summery of sampling procedure for the study on prevalence and factors associated with modern contraceptive discontinuation among women in reproductive age (15-49) in Kombolcha district, Eastern Ethiopia, 2018.

The minimum allocated sample size for Melka Rafu was 212, Ija ginaa was 186, Burka Negeya was 149, Kerensa was 123, Bake was 86 and Tula was 58 with a sampling interval of 2 for each this made a total of 814 samples to be collected from the study site.

3.8. Data collection

3.8.1. Data collection Tools

Based on the information found after extensive review of similar studies done previously, structure, pretested questionnaires were developed for data collection on the variable needs. The socio-demographic, obstetric and behavior characteristics, and information on family planning and counseling during contraceptive provision factors were contained in the data abstraction format. The questionnaire prepared in English language were translated into Afan Oromo by using language expert. And again back- translated to English by another expert to ensure its consistency and accuracy. Pretested structured questionnaires were used to collect data from participants through face-to-face-interview.

3.8.2. Data Collectors

Data were collected by six trained diploma health professionals (who fluently speak, read and write English and local language) in a carful and ease manner.

3.8.3. Data collection Procedure

Data were collected through interview from study participants from March 21-30, 2019 at household level in a separate quite area. Close daily supervision, spot check and end of every day checking of completeness and consistency of data abstraction format, and evaluation of daily performance were made by the field supervisors and the investigator. Based on the finding, immediate feedback were presented to the respective data collector.

If respondents were not present at home or the house is close during field visit, three visits (including the 2 revisit) was done, they were considered and recorded as non- responder.

3.9. Study variable

3.9.1. Dependent variable

- ✓ Contraceptive discontinuation status

3.9.2. Independent variables

- Socio-demographic characteristics

- Age
- Marital status
- Educational status
- Place of residence

- Obstetric and Behavior
  - Number of living children
  - Husband support
  - Frequency of sexual intercourse
  - Decision on the number of children
  - Decision on Method type
- Information and counseling related factors
  - Information on FP methods
  - Counseling during service
- Method related factors
  - Side effects/Health concern/
  - Desired more effective method (Switching)
  - Inconvenience to use
  - Desire for pregnancy
  - Method failure
  - Type of method selected/used/

3.10. Operational definitions

Modern contraceptive methods: Contraceptive methods which are very effective in preventing pregnancy and includes female and male Sterilization, Pills, IUCD, Injectable, Implants, male and female condoms and emergency contraceptive (Health(FMOH) 2011; CSA and ICF, 2016).

Contraceptive Discontinuation: is defined as stopping episodes of contraceptive use within the preceding three years for any reason.(Castle and Askew, 2015; Ali et al., 2012; Yideta ZS, 2017; CSA and ICF, 2016)

Episode: is defined as a period of uninterrupted use (at least three months) that may or may not have ended.(Ali et al., 2012; Yideta ZS, 2017; CSA and ICF, 2016).

Counseling: Making the women aware of its duration of protection, side effects, benefit and effectiveness of the method, and facilitate informed decision. (Asaye et al, 2018)

Switching: A woman is considered to have switched to another method if she used a different method in the month following discontinuation or if she gave "wanted a more effective method" as the reason for discontinuation (CSA, 2016).

Infrequent sex: Includes infrequent sex/husband away, difficult to get pregnant/menopausal, and marital dissolution/separation etc. (CSA, 2016).

Method failure: Meaning that, a women became pregnant while using the method (Ali et al., 2012)

Near to health center: Place with in the distance of adjacent kebele to the health center and easily access to all type of family planning (contraceptive) services, except the non-reversible (Female and male Sterilization) one.

Side effect: is any health problem (physiological change) related to the use of current contraceptive methods (Abreham N. and Achamyelesh G., 2018).

3.11. Data quality control

Data collectors and supervisors were trained for three days on how to use and fill questioners. Questionnaire was pretested in 41 subjects (5% of samples) in Felana and Bilisuma kebele of the same district within a week prior to actual study and its findings were used to modify tool. Data abstraction format was prepared in English and then translated to Afaan Oromo and were back translated to English by two independent translators. Overall field work were supervised by two experienced public health professional and principal investigator. Collected data were checked daily for completeness and consistency. Epi Data-3.1 were used for double entry.

3.12. Method of data analysis

After checking of data completeness and consistency, EpiData-3.1 was used for data entry. Data was exported to and analyzed by SPSS-23. Descriptive analysis and statistics was used accordingly to describe characteristics of participants. Statistical association between each predictors and outcome were seen by 2x2 tables' findings and bivariable logistic regression. Predictors with $P<0.25$ during bivariate analysis were a candidate for Multivariate Logistic Regression (MLR) to control for possible confounders. Multicollinearity was checked to see the linear correlation among

the independent variables by using standard error. Model adequacy was seen by Omnibus and Hosmer-Lemeshow *goodness-of-fit-test.* A P<0.05 and AOR with its 95%CI were used to report presence and strength of associations respectively. Texts, graphs, tables and estimates were used to present findings.

3.13. Ethical consideration

Ethical clearance was obtained from Haramaya University, Institutional Health Research and Ethical Review Committee (IHRERC), of Harar Campus College of Health and Medical Sciences. A permission letter obtained from school of graduate study was submitted to district health office. Then official co-operative letter to all hierarchy office was written. The study subjects were clearly informed about the purpose, the way and anticipate benefit of the study, by the data collectors. Informed, voluntary, written and signed consent was obtained from each study participant similarly for study subject's age less than 18 years it was taken from respected parents/guardian. While, finger signing was used for those not able to sign by pen. The participants were informed that the information collected is anonymous, was withdraw from the interview if they are unhappy during the interview and only participated those who were using for the interview, and confidentiality of responses were maintained throughout the research process. Personal privacy and cultural norms were respected properly. In addition, the name of participants even address concern of the study participants was not included in the questionnaires to ensure confidentiality.

3.14. Information dissemination

This study findings is communicated to Haramaya University, Advisors and Program Coordinator through written and oral presentation. It was also communicated to zonal and District Health office, and healthcare facilities and at large communities of district. Last but not least; efforts was be made to prepare a manuscript for publication on peer reviewed journal.

4. RESULTS

4.1 Socio-Demographic Characteristics of the Study Participants

A total of 806 women were included with a response rate of 99.3%. From the 806 women, majority of them, 270 (33.5%) were found within the age group of 25-29. The mean age of the participant was 29.2 and standard deviation 5.4, where the lower age boundary was 18 year with 4 (0.5%) respondents and the higher age boundary of 46 years with 2 (0.2%). Majority of the women, 758(94%) were married and still in union. Among the total women, 758(94%) were Muslims by their religion and the majority of the respondent, 776(96.3%) were Oromos.

Most women, 450 (56%) don't have formal education, followed by the 214 (26%) and 72 (9%) of women with primary school, and diploma and above educational status respectively. Likely majority of their partner, 372 (46%) were not at least joined formal education and 231 (29%) were joined primary school education. Housewives took the largest share with 524(65%). And 58.2% of their partner were farmers by occupation. Majority of the women, 589(73.1%) live in rural area as shown in table 2.

Table 2: Socio-demographic characteristics of reproductive age women in Kombolcha district, East haraghe zone, Oromia, Ethiopia, March 2019 (n = 806).

Socio-demographic characteristics		Frequency (%)
Age of the Women	15 – 24	154 (19)
	25-34	501 (62)
	35-45	151 (19)
Marital Status	Married (Women in Union)	758 (94)
	Women not in Union	48(6)
Educational status of the Women	No formal education	450 (56)
	Primary school	214 (26)
	Secondary School and preparatory	70 (9)
	Diploma and above	72 (9)
Educational status of the spouse	No formal education	372 (46)
	Primary school	231 (29)
	Secondary School and preparatory	77 (10)
	Diploma and above	118 (15)

Residence of the Women	Rural	589 (73)
	Urban	217 (27)
Religion	Muslim	758 (94)
	Orthodox	39 (4.8)
	Protestant	9 (1.1)
Ethnicity	Oromo	776 (96.3)
	Amhara	19 (2.4)
	Guraghe	11 (1.4)
Occupation of the Women	Housewife	524 (65)
	Merchant	187 (23.2)
	Gov't employee	68 (8.4)
	Farmer/agriculture	26 (3.2)
	Private employee	1 (0.1)
Occupation of the spouse	Farmer/agriculture	469 (59.6)
	Merchant	185 (23.5)
	Gov't employee	104 (13.2)
	Private employee	29 (3.7)

4.2 Contraceptive Method Information and Counseling

From the total 806 respondents, majority of them, 791 (98.1%) have had ever heard about importance of contraceptive methods for either to space or limit pregnancy. Among those who reported they got information about family planning method 262(33%) women were getting from neighbors and health worker including HEW. Out of the total women, 382 (48%) of them known/heard/ at least the three types of family planning methods (i.e. injectable, pills and implants) and 291 (37%) women know/heard/ the four types (injectable, pills, implants and IUCD).

More than 80% of the participants had got counseling service prior to the initiation of family planning. Among these, nearly half of them (49.1%) had been counseled about the four main contents of counseling; Benefit, duration of action, effectiveness and side effects.

4.3. Obstetrics and Behavioral characteristics

Out of the total 806 participants, 221 (27%) of the women have had less than or equal to two living children and 305(38%) had got 5 and above living children. The mean number of living children per women's is 3.93 ± 1.9, ranging from 0 to 11. Almost one third 240(30%) of the total respondents confirmed that their husband is the final decision maker on the number of children that the family wants to have. The study found that majority of the respondents 371 (46%) took decision to use family planning jointly with their husbands, 322(40%) took decision independently and the rest 113(14%) were forced by their husband's decision.

Husband support was provided for 528(65.5%) of respondents. Out of the total respondents, only 39 (5%) of women have faced problem in practicing frequent sex. Of those women, 12(31%) have reported marital separation (living at a distance from spouse) as a reason for the infrequent sex, and followed by women who have sexual discomfort, divorced and widowed, equally contributing 7 (18%).

4.4. Method related characteristics

The most ever used type of method was implant, with 396(49.1%) users followed by injectable 342 (42.4%). Out of the stated reasons for discontinuation, fear of side effect (39.7%) and wants to be pregnant (27.8%) were the dominant factors. A total of 134 women had developed side effects during method use. However, 14 of them continue using the method despite it develops a side effect. Out of those women who reported having side effects, 56(42%) had encountered three concerning problems including abnormal vaginal bleeding, headache and weight loss/gain/ at the same time. Another, 38(28%) women had faced abnormal vaginal bleeding and headache, 25(19%) reported that they had abnormal vaginal bleeding and weight loss/gain. The other reasons for discontinuation were related with method inconvenience and method failure with 15.2% and 5.6% respectively. Among the total cases who found to be discontinued, 116(38.4%) of them were found to switch to other methods with 64(55.2%) shifting to Implant and 20(17.2%) to IUCD. Additionally among the respondents, 43(5.34%) women's had perceived these reasons and yet hadn't discontinued at the time of the interview. Despite the fact the respondents had compliant of the methods, 14 continued with the side effect, 12 with method inconvenience, 9 in need of more children, 4 because of infrequent sex practice and 4 of the participants planned to shift to other methods of contraceptives.

4.5 Contraceptive discontinuation status

The magnitude of modern contraceptive discontinuation was 302/806 (37.46%) with (95% CI: 34.2, 40.7) (Figure 3). The discontinuation rate within 6 month was 30/302 (10%), before the first year was 114/302 (38%), within 12-23 months of use was 117 (39%). Whereas two year and above rate of discontinuation was 71/302 (23%). Among the majorly used family planning methods, the highest discontinuation was for the injectable 170(56.3%), followed by the implants 103(34.1%). In contrast to this, women who used pills and IUCD had a discontinuation rate of 25(8.3%) and 4(1.3%). The median duration of use prior to stopping the method was 12 months with minimum of 3 and maximum of 36 months.

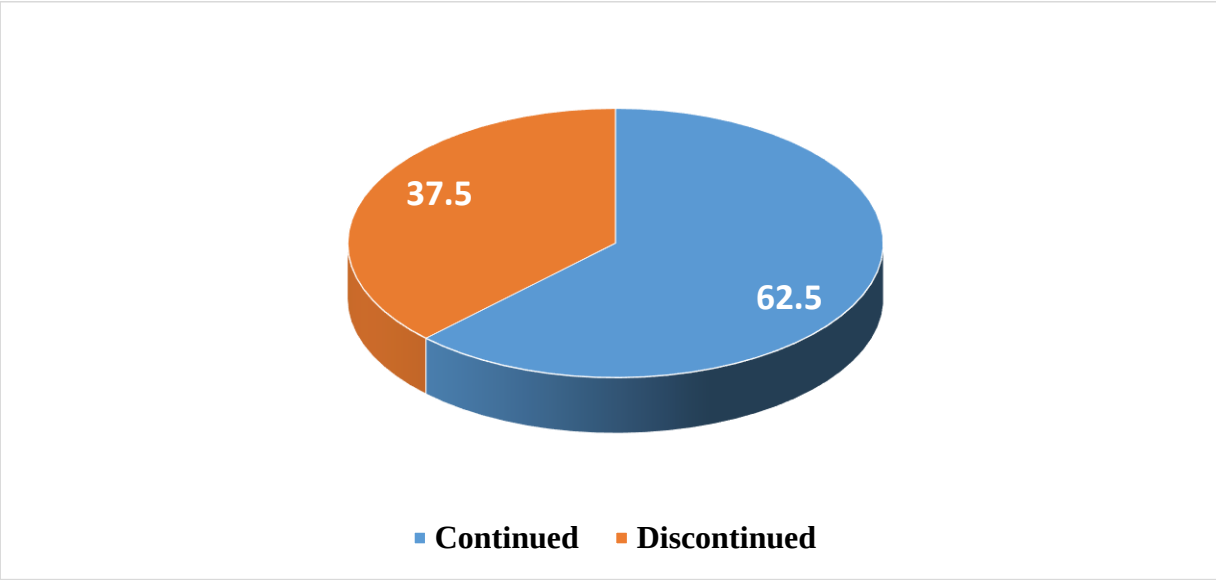

Figure 3: Prevalence of contraceptive discontinuation among women in reproductive age of kombolcha district, March 2019.

4.6. Factors Associated with contraceptive Discontinuation.

With regard to method of selection and use, women who reported of injectable as a method they used were almost 4 times more likely to discontinue the method (COR=3.9:95%CI (1.3 - 12.07) compared with those who were used IUCD method. Similarly, pill users were 4.4 times more likely to discontinue (COR=4.4:95% CI (1.27 - 14.93) in comparison to IUCD, as shown in the table below.

Table 3. Binary logistic regression analysis for the contraceptive discontinuation status and factors associated among women of reproductive age in Kombolcha district, March 2019

Variables		Contraceptive discontinuation status		Crude OR(95% CI)	P value
		Yes (%)	No (%)		
Age of the women	15 – 24	55 (36)	99 (64)	1.12 (0.7 - 1.8)	0.633
	25 – 34	197 (39)	304 (61)	1.3 (0.9 - 1.92)	0.169
	35 – 39	50 (33)	101(67)	1	
Marital Status **	Women not in union	33 (69)	15 (31)	3.99 (2.13 - 7.5)	0.000
	Married and in Union	269 (35.5)	489 (64.5)	1	
Educational status of women	No formal education	163 (36)	287 (64)	0.89 (0.54 - 1.49)	0.663
	Primary school	89 (42)	125 (58)	1.12 (0.65 - 1.93)	0.687
	Secondary and preparatory	22 (31)	48 (69)	0.72 (0.36 - 1.44)	0.353
	Diploma and above	28 (39)	44 (61)	1	
Educational status of spouse	No formal education	143 (38)	229 (62)	0.88 (0.58 - 1.34)	0.55
	Primary school	83 (36)	148 (64)	0.79 (0.5 - 1.24)	0.308
	Secondary and preparatory	22 (29)	55 (71)	0.56 (0.3 - 1.04)	0.067
	Diploma and above	49 (41.5)	69 (58.5)	1	
Place of Residence	Urban	91 (42)	126(58)	1.29 (0.94 - 1.78)	0.112
	Rural	211 (36)	378 (64)	1	
Number of living children	≤ 2	92(42)	129(58)	1.3 (0.91 - 1.86)	0.147
	3 up to 4	102 (36)	178 (64)	1.05 (0.75 - 1.47)	0.797
	≥ 5	108 (35)	197 (65)	1	

Who Decides on number of children*	Husband	143 (60)	97 (40)	4.86 (3.45 - 6.86)	0.000
	You yourself	52 (39)	81 (61)	2.12 (1.4 - 3.21)	0.000
	Husband family	10 (62.5)	6 (37.5)	5.5 (1.95 - 15.51)	0.001
	Both	97 (23)	320 (77)	1	
Did you Get Counseling**	No	121 (76)	38 (24)	8.2 (5.48 - 12.27)	0.000
	Yes	181 (28)	466 (72)	1	_
Who Decide to use FP *	You yourself	178 (55)	144 (45)	4.36 (3.13 - 6.06)	0.000
	Husband	42 (42)	71 (58)	2.09 (1.33 - 3.28)	0.001
	Both	82 (22)	289 (78)	1	
Which Method did you use*	Injectables	170 (50)	172 (50)	3.95 (1.3 - 12.07)	0.016
	Pills	25 (52)	23 (48)	4.35 (1.27 - 14.93)	0.020
	Implants	103 (26)	293 (74)	1.41 (.46 - 4.3)	0.550
	IUD	4 (20)	16 (80)	1	
Husband support**	No	141 (51)	134 (49)	2.42 (1.79 - 3.27)	0.000
	Yes	160 (30)	368 (70)	1	
Method inconvenience **	Yes	46 (79)	12 (21)	7.37 (3.83 - 14.16)	0.000
	No	256 (34)	492 (66)	1	
Method side effect**	Yes	120 (89)	14 (11)	23.08 (12.9 - 41.2)	0.000
	No	182 (27)	490 (73)	1	
Desired to be pregnant	Yes	84 (90)	9 (10)	21.2 (10.5 - 42.9)	0.000
	No	218 (31)	495 (69)	1	

N.B- Bolded ones in the table above represent candidates for multivariable logistic regression analyses. COR=Crude odd ratio * shows association having p-value < 0.05 & ** association having p-value < 0.001.

However, in multivariable logistic analysis only, counseling prior the service, decision to use FP, developing of side effects, husband support, method inconvenience and marital status found significant associated factors with contraceptive discontinuation.

According to this study, one of the factors related to contraceptive discontinuation was marital status (currently in union or not) of the women's. So, women who had not been living with their husband (not in union) were 8.2 times more likely to develop contraceptive method discontinuation than those who had marriage and still in union (AOR= 8.18; 95%C.I: (3.55, 18.87). The study suggested that the odds of discontinuing among women who did not counseled prior to the service were more than 9.2 folds than those who got counseling service about the contraceptive methods (AOR = 9.17; 95%CI: 5.37, 15.68). The odds of discontinue among women who didn't have husband support were more than 3 times than those who have husband support (AOR=3.43; 95%CI: 1.41, 8.36). The study have indicated that the odds of discontinuation among women who took decision to use family planning independently were more than 6.6 times than those who had taken decision to use jointly with their husbands (AOR =6.61; 95%C.I: 2.61, 16.72). The analysis showed that the odds of contraceptive method discontinuation among women who develop side effects were 36 times than those who had not developed side effects (AOR = 36; 95% C.I: 18.6, 70.6). The study also revealed that the odds of discontinuation among women who had method inconvenience were more than 11 times than those who had not have method inconvenience (AOR= 11.06; 95%C.I: 4.91, 24.9) (Table 4).

Table 4: Multivariable logistic regression analysis for contraceptive discontinuation status and factors associated among women started FP in Kombolcha district, Oromia, Ethiopia, Mar. 2019

Variables		Contraceptive discontinuation status		COR(95% CI)	AOR (95% CI)
		Yes (%)	No (%)		
Marital Status**	Women not in union	33	15	3.99 (2.13 - 7.5)	8.18 (3.55 - 18.87)
	Married and in Union	269	489	1	1

Who Decides on number of children	Husband	143	97	4.86 (3.45 - 6.86)	4.2 (2.44 - 7.23)
	You yourself	52	81	2.12 (1.4 - 3.21)	0.70 (0.37 - 1.35)
	Husband family	10	6	5.5 (1.95 - 15.51)	4.47 (1.2 – 16.47)
	Both	97	320	1	1
Method Counseling**	No	121	38	8.2 (5.48 - 12.27)	9.17 (5.4 – 15.68)
	Yes	181	466	1	1
Who Decide to use FP**	You yourself	178	144	4.36 (3.13 - 6.06)	6.6 (2.61 – 16.72)
	Husband	42	71	2.09 (1.33 - 3.28)	0.51 (0.24 - 1.05)
	Both	82	289	1	1
Which Method did you use	Injectable	170	172	3.95 (1.3 - 12.07)	1.5(0.39 – 5.76)
	Pills	25	23	4.35 (1.27 - 14.9)	1.2 (0.25 – 5.81)
	Implants	103	293	1.41 (.46 - 4.3)	0.72 (0.19 – 2.77)
	IUD	4	16	1	1
Husband support*	No	142	136	2.40 (1.78 - 3.24)	3.43 (1.41 – 8.36)
	Yes	160	368	1	1
Method inconvenience **	Yes	46	12	7.37 (3.83 - 14.2)	11.06 (4.9 – 24.9)
	No	256	492	1	1
Method side effect**	Yes	120	14	23.1 (12.9 - 41.2)	36 (18.6 – 70.6)
	No	182	490	1	1

COR=Crude Odd Ratio AOR=Adjusted Odds Ratio

5. DISCUSSION

The major objective of this study was to determine the magnitude and associated factors of discontinuation of modern contraceptive methods, among reproductive age women in Kombolcha district. Counseling about family planning, decision on the type of method used, presence of side effect and husband support and inconvenience during family planning method use, were found to be associated with discontinuation of modern family planning.

According to this study, the proportion of discontinuation among women who have ever used contraceptive method was found to be 37.5%. This result is similar to the community based cross sectional study done in Mekelle City, Tigray, Ethiopia (G/Medhin Ts. et al., 2019) finding (% 38) and 2016 EDHS finding (35%) (CSA. et al., 2016). On the other hand, when we compare with a community based cross sectional studies conducted in Agarfa district, Bale zone, South East Ethiopia (Bekele et al., 2015) and Humera Town, Northern Ethiopia (Belete N. et al., 2018), the finding of this study is a bit higher. The main reason for this could possibly be attributed to the difference in study setting and also lack of pre initiation counseling particularly about the possible side effects of the method and lack of educational preparation of the women compared to the study in Agarfa district and Humera town.

According to our study counseling on family planning has become one of the variables associated with discontinuation. As a result, those women who didn't get counseling service during the initiation of family planning were 9.2 times more likely to discontinue family planning than those who got ample counseling. Whereas a cross sectional studies done in Debre Markos town, Northwest Ethiopia (Siyoum et al., 2017) and Dale District, Southern Ethiopia (Nageso A. and A, 2018), has shown that women who didn't get counselling service were 1.2 and 1.93 times more likely to discontinue using family planning than those who got the counselling service. Here it can be seen that pre initiation counselling has a vital and unreplaceable role for sustainable use of family planning. The huge gap among this and other studies could be attributed to the poor quality and content of counselling (majorly on side effect) as it has been confirmed by the respondents. This may be also related to the lack of adequate understanding between the care providers and the women who came for family planning use as shown in both Debre Markos and Dale district study.

One of the factors that have been found to be related with discontinuation was lack of practice of mutual decision to use family planning. Accordingly, women who decided to use family planning

independently were found to be 6.6 times more likely to discontinue than those who had decided to use jointly with their husbands. According to a community based across sectional study done in Agarfa district (Bekele et al., 2015), the odds of discontinuation among a couples having a decision by a husband alone were 2.8 times more likely to discontinue using family planning than those who gave decision mutually after common understanding has been reached. Since family planning is an issue concerning the natural reproduction of both couples, the role and responsibility attained by both is determinant and affects the rate of discontinuation. Here it is evident that lack of mutual decision has a negative impact over the sustainable use of the methods resulting in undesirable outcome. As contraceptive issues are going to be a mutual agenda, both will strive to receive a better information and counseling to have an informed common decision on their method and be more aware of potential side effects, and any other social, cultural, economic challenge and how to cope with them and motivate in continuing contraceptive utilization.

According to this study, the development of side effect during the use of family planning has been found to be associated with discontinuation and this has been shown as, the odds of discontinuation among respondents who developed side effects was 36 times more likely than those who did not develop side effects. It accounts for 40% of reason for contraceptive method discontinuation, which makes it the main factor. According to a community based cross sectional study done in Ofla district, Tigray, Northern Ethiopia (Birhane et al., 2015) revealed that women who have developed side effects were 2.8 times more likely to discontinue as compared to women who didn't developed side effect. Another cross sectional study done in Pakistan (Azmat et al., 2012) in 2012, showed that women who had developed side effects and result in health problem were 4.2 times more likely to discontinue using contraceptive method.

The difference in proportion can be attributed to the poor quality of information that women have had, and lack of or poor quality of counseling, which makes a women unable to cope with new methods related to physiological changes or side effect experienced that could contribute for discontinuation. Besides to the above fact, it can be seen that there is quality compromisation in provision of counseling among the health workers/HEW leading to the conclusion that side effects are not manageable among the women who had the burden of side effect.

Among the variables that were associated with the magnitude of discontinuation was, husband support, meaning those who didn't have husband support during family planning use, either to limit or space number of children want to have. In this study, women with absence of husband

support were found to be more likely to result in contraceptive discontinuation when compared with the counterpart. This result is almost in line with a community based cross sectional study done in Humera Town, Northern Ethiopia (Belete N. et al., 2018). Where participants were in lack of husband support were almost 13 times more prone to discontinue contraceptive. Similarly, study in Uganda also confirmed that absence of partner support had double the risk of getting short duration of birth interval (less than 2 years) (Muhindo R. et al., 2015). This is due to the poor contraceptive use and adherence, which is mainly related to husband disapproval and male dominance in one way and lack of empowerment of women in other way, in these study settings.

Partner support is believed to deserve informed mutual decision in every aspect of fertility, through pursuable communication. Hence, women would be empowered to deliberately select a particular contraceptive method, resolve any perceived and/or encountered side effect, to use contraceptive and ensure continuation (Mohammed A. et al., 2014).

The other associated factor was method inconvenience. Due to the variable nature and application of contraceptive methods, women should be provided with a competent and more suitable method, reliant on the informed decision. The more the women was not informed/counseled/ about the family planning options, natures and the way it is used, the more she will choose unsuitable one. This majorly explained by method inconvenience. According to this study, women who were inconvenient with the family planning service or method received were found to be 11 times more likely to discontinue FP than those women who were convenient with family planning service/method.

Which is somewhat consistent with the result of a study done in Cambodia, in 2014 (Wang and Hong, 2017.). However, the 2016 EDHS report and study done revealed that, the prevalence of all contraceptive method inconvenience was around (6%) six percent (CSA. et al., 2016), which is too much lower than this study. This also holds true for study done in United states (Jennifer J. Frost, 2007). Improvements in accessibility and quality of family planning service could have been found to decrease the likelihood of method inconvenience much more when compared with previous results. It is so important to have any information regarding inconvenience of family planning method that women deal with for anyone concerned with family planning.

The other associated factor was marital status (live in union with husband or not) of the women. So as a result of this study, women who had not been living with their husband were 8.2 times

more likely to develop contraceptive method discontinuation than those who had marriage and still in union. Which is too high than the study done in jimma (Yideta ZS, 2017), where odds of discontinue among those women not in union (divorced) were 2.5 times more than women who had marriage and currently live with partner. This is also true for study done in St. Louis City, Washington DC (Grunloh DS., Casner T. et al. 2014), which have had single and divorced,/separated and widowed women were slightly more likely to discontinue compared to married women. Even though, discontinuation rate varied depending on the type of method that women were using and awareness they have. Unmarried participants may be less likely to be in stable relationships or sexually active and thus more likely to discontinue their contraceptive method as compared to married and cohabitating participants.

6. LIMITATIONS OF THE STUDY

The main limitation that was noticed in this study was recall bias since the study participants were modern contraceptive users in the past three consecutive years, despite the trying of a more probing type of questioning which have been performed to facilitate memorization.

7. CONCLUSION AND RECOMMENDATION

7.1 Conclusion

In conclusion the magnitude of contraceptive discontinuation has become 37.5%.This is considered to be higher than national studies such as EDHS. Various factors including, counseling about family planning, decision on the type of method used, presence of side effect, method inconvenience, husband support and marital status were found to be associated with discontinuation of modern family planning.

7.2 Recommendation

Depending on the findings determined there is still a more expected action to be take in order to decrease the magnitude of contraceptive discontinuation from local district to national level. Therefore the following stakeholders are recommended to take action according to the findings of this study.

Kombolcha District Health Office

-Health workers should provide counseling prior to family planning method provision and should adhere to the standard of counseling.

-All types of family planning method should be confirmed in every health facility, through provision of full package of family planning.

-Comprehensive and need specific health education and promotion with male involvement under consideration should be run in family planning.

Kombolcha District Women Affairs

-Strengthening women development army so as women can have a better information in regarding contraceptive methods.

-Should work in collaboration with Woreda Health office for empowerment of women.

Nongovernmental organizations

Transform PHCU and Others

-Since partners are closely found in East Hararge Zone health office, concerned ones must reassess their performance and give the necessary supportive supervision accordingly.

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9. APPENDICES

9.1. English Version Participant information sheet and informed voluntary consent form

My name is_____I am working as a data collector for the study being conducted in this Hospital by **Abebayehu Girma** who is studying for his master's degree at Haramaya University, the Collage of Health and Medical Sciences. I kindly request you to lend me your attention to explain you about the study and being selected as a study participant.

Study title: Magnitude and factors associated with modern contraceptive discontinuation among currently married women in reproductive age (15-49) in Kombolcha district, East Hararge zone, Oromia region, Ethiopia

Purpose/aim of the study: The principal aim of this study is to write a thesis as a partial fulfillment for a Master's program in Reproductive health for the principal investigator. Moreover, the findings of this study was be used as an input for the district health managers and other stakeholders to plan intervention program to deal on the factors that affecting continual use of modern contraceptive in your community and others.

Procedure and duration: I was be interviewing you using a questionnaire to provide me with pertinent data that is helpful for the study. There are about 38 questions to answer where I was fill the questionnaire by interviewing you. The interview was take 30 minutes, so I kindly request you to give me attention this time for the interview.

Risks and benefits: The risk of participating in this study is very minimal, but only taking 30 minutes from your time. There would not be direct payment for participating in this study. But the findings from this research may reveal important information for the local health planners.

Confidenentiality: The information you was provide us was be kept confidential. There was be no information that was identify you in particular. The findings of the study was be general for the study community and was not reflect anything particular of individual persons or housing. The questionnaire was be coded to exclude showing names. No reference was be made in oral or written reports that could link participants to the research

Rights: Participation for this study is fully voluntary. You have the right to declare to participate or not in this study. If you decide to participate,you have the right to withdraw from the study at any time and this was not label you for any loss of benefits which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

Contact address: If there are any questions or enquires any time about the study or the procedures, please contact me through this address: **Abebayehu Girma** at (+251)-9-13-20-69-58 or e-mail address at abebayehugirma7@gmail.com and Institutional Health Research Ethics Review Committee (IHRERC) at office phone (+251)-0254662011 or P.O.Box 235, Harar, Ethiopia.

Declaration of informed voluntary consent:

I have read/ was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to participate in this study with my initials (signature) as indicated below.

Name and signature of participant: Name _____ Signature_____ Date_____

Name and signature of data collector: Name _____Signature _____Date_____

Thank you very much!!

9.2. Afan Oromo version Participant information sheet and informed voluntary consent form

Ibsa hirmaattotaa qorannoof kennamuu fi unka walii galtee

Akkam bultan/ooltan, maqaan koo_____ jedhama. Ganda/Araddaa kana keessatti qorannoo obbo Ababaayahu Girmaa, digrii lammaaffaaf Yunivarsiitii Haramaayaa, kolleejjii Saayinsii Fayyaatti barachaa jiruuf sassaabuun jira. Waa'ee qorannoo kanaa fi akkaataa qorannoo kanatti akka hirmaattan ittin filatamtan akkaan isiniif ibsuuf yeroo muraasa akka naaf kennitan isin gaafadha.

Mata duree Qorannichaa: Baayyiina fi sababoota adda kutu mala karoora maatii ammayyaa dubartoota yeroo ammaa bultii qaban fi umrii isaanii(15-49) kan tahini fi Aanaa Kombolcha, Godina Harargee Bahaa, naannoo Oromiyaa, baha Itiyoophiyaatti qorachuuf kan qophaa'e dha.

Sababa qorannichaa: Sababni guddaan qorannoon kun barbaachiseef abbaan qoranichaa obbo Ababaayahu Girmaa qorannoo digrii lammaffaa argachuuf isaan barbaachisu guutuufi dha. Dabalataanis, bu'aan qorannoo kanaa galtee hoggantoota fayyaa fi dhaabilee deeggartoota fayyaa biroof rakko/sababaa hawwan karoora maatii akka adda kutan godhee jadhamee adda bahu ka'umsaa godhachuun tarkaanfii sirreeffamaa fudhachuuf kan fayyaduudha.

Adeemsaa fi turtii qoranichaa: Qoranichi haawwan ulfaa irratti kan geggeeffamu ta'ee, waliigala gaafilee 38 kanan of harkaa qabu ta'ee gaafilee kana haati kan deebistu ta'a. Walumaagalatti qoranichi haadha tokkoof naannoo daqiiqaa 30 ni fudhata. Kanaaf qorannoo kana akkaan gegeessuf akka naaf heyyamtan isin gaafadha.

Faayidaa fi miidhaa qoranichaa: Sababa qorannoo kanatti hirmaattaniif rakkoon guddaa isin irra gahu hin jiru, yeroo keessan muraasa isin irraa fudhachuu keenyaan alatti. Faayidaa kallattiin sababa hirmaannaa keessaniin argattan hin jiru. Garuu odeeffannoon isin kenitan fi bu'aa qorannaa kanaa karoorsitoota fayyaa sadarkaa sadarkaan jiraniif galtee guddaa taha.

Iccitii eeguu: Ragaan isin nuuf kennitan iccitiin qabama. Kallattiin wanti addatti isin calaqqisu/ibsu asirratti barreeffamu hin jiru. Bu'aan qorannoo kanaa ummata naanoo kanaa akka waliigalaatti malee addatti hirmaattota kan calaqqisu miti. Deebiin keessan yommuu galmeeffamu

maqaa keessan hin dabalatu, afaaniinis tahe barreeffamaan wantii hirmaattota addatti ibsu danda'uu yookiin qorannoo kana keessa hirmaachu keessan ibsu ykn walitti qabatu hin jiru.

Mirga: Hirmaannaan fedhii keessan irratti kan hundaa'e dha. Qorannoo kana irratti hirmaachuuf murteessuu yookiin dhiisuu dandeessu. Hirmaachuuf murteessitan illee yeroo barbaaddan qorannoo kana addaan kuttanii bahuuf mirga guutuu qabdu. Sababa kanaan faayidaa isin argachuu qabdan kan dhabdan hin jiru. Gaafii isini deebisuu hin barbaanne yoo jiraate deebisuuf dirqama hin qabdan.

Teessoo: Gaafii ykn qeeqa qo'annoo kana ilaallatuu kamiifuu, teessoo armaan gadiin gaafachuu fi quunnamuu ni dandeessu

Qo'ataa muummee: Obbo Ababaayahu Girmaa

lakk. bilbila mobayilii: (+251)-9-13-20-69-58

E-mayilii abebayehugirma7@gmail.com

Waajjira dhimma naamusaa qo'annaa fayyaa dhaabbatichaa (IHRERC) lakkofsa bilbilaa (+251) -0254662011 ykn lakk.Poostaa 235, Harar, Itoophiiyaa.

Ibsa fedhii hirmaataa qoranoo ta'uu ykn mirkaneessuu: Ibsa hirmaattota qorannoof kennamuu dubbiseera/ naa dubbifameera. Faayidaan qorannoo kanaa sirriitti naaf galee jira, akkaataa, rakkoo fi faayidaa akkasumas waa'ee iccitii eeguu, mirgaa hirmaataan qabu, akkasumas walquunnamtii kamuu barbaachiseef teessoon natti himameera. Waan naa hin galle gaafachuuf carraan naa kennameera.wayita kamiyyuu qorannoo kana addaan kutee bahuu akkan dandahu, akkasumas gaaffiin debisuu hin barbaanne deebisuuf akkaan hin dirqamne. Kanaafuu qorannoo kanatti fedhiin kan hirmaadhu ta'uu mallattoo koon nan mirkaneessa.

Maqaa hirmaataa _____Mallattoo_____Guyyaa _____

Maqaa ragaa sassaabaa _____Mallattoo _____Guyyaa _____

Baayyee Galatoomaa!!

9.3. English Version information sheet and informed voluntary consent form of parents/guardians/husband whose age is below 18 years.

My name is_____. I am working as a data collector for the study being conducted in this school by **Abebayehu Girma_**who is studying for his master's degree at Haramaya University, college of Health and Medical Sciences. I kindly request you to lend me your attention to explain you about the study and your institution being selected as the study setting.

The study/project title:

Magnitude and its' associated factors of contraceptive discontinuation among women in reproductive age group in Kombolcha district of Oromia region of eastern Ethiopia in 2019.

Purpose/aim of the study:

The principal aim of this study is to write a thesis as a partial fulfillment for a Master's program in Reproductive health for the principal investigator. Moreover, the findings of this study was be used as an input for the district health managers and other stakeholders to plan intervention program to deal on the factors that affecting continual use of modern contraceptive in your community and others.

Procedure and duration:

I was be interviewing your daughter/wife using a questionnaire to provide me with pertinent data that is helpful for the study. There are about 38 questions to answer where I was fill the questionnaire by interviewing you. The interview was take 30 minutes, so I kindly request you to give me attention this time for the interview.

Risks and benefits:

The risk of participating in this study is minimal, but only taking few minutes from your daughter/wife. There would not be any direct payment for participating in this study. However, the findings from this research may reveal important information for the local health planners.

Confidentiality:

The information that we was be provided was be kept confidential. There was be no information that was identify the participants in particular. The findings of the study was be general for the study community and was not reflect anything particular of individual persons. The questionnaire was be coded to exclude showing names. No reference was be made in oral or written reports that could link participants to the research.

Rights:

Participation for this study is fully voluntary. The participants have the right to declare to participate or not in this study. If they decide to participate, they have the right to withdraw from the study at any time and this was not label them for any loss of benefits, which they otherwise are entitled. They do not have to answer any question that they do not want to answer.

Contact address:

If there are any questions or enquires any time about the study or the procedures, please contact me through this address: **Abebayehu Girma** at (+251)-9-13-20-69-58 or e-mail address at abebayehugirma7@gmail.com and Institutional Health Research Ethics Review Committee (IHRERC) at office phone (+251)-0254662011 or P.O.Box 235, Harar, Ethiopia.

Declaration of informed voluntary consent:

I have read/ was read to me the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore, I declare my voluntary consent to participate in this study with my initials (signature) as indicated below.

Name and signature of parent/Guardian: Name _____Signature _____Date____

Name and signature of data collector: Name _____Signature_____ Date_____

Thank you very much!!

9.4. Afan Oromo version information sheet and informed voluntary consent form of parents/guardians whose age is below 18 years.

Ibsa hirmaattotaa qorannoof kennamuu fi unka walii galtee

Akkam bultan/ooltan, maqaan koo_____ jedhama. Ganda/Araddaa kana keessatti qorannoo obbo Ababaayahu Girmaa, digrii lammaaffaaf Yunivarsiitii Haramaayaa, kolleejjii Saayinsii Fayyaatti barachaa jiruuf sassaabuun jira. Waa'ee qorannoo kanaa fi akkaataa qorannoo kanatti akka hirmaattan ittin filatamtan akkaan isiniif ibsuuf yeroo muraasa akka naaf kennitan isin gaafadha.

Mata duree Qorannichaa: Baayyiina fi sababoota adda kutu mala karoora maatii ammayyaa dubartoota yeroo ammaa bultii qaban fi umrii isaanii(15-49) kan tahini fi Aanaa Kombolcha, Godina Harargee Bahaa, naannoo Oromiyaa, baha Itiyoophiyaatti qorachuuf kan qophaa'e dha.

Sababa qorannichaa: Sababni guddaan qorannoon kun barbaachiseef abbaan qoranichaa obbo Ababaayahu Girmaa qorannoo digrii lammaffaa argachuuf isaan barbaachisu guutuufi dha. Dabalataanis, bu'aan qorannoo kanaa galtee hoggantoota fayyaa fi dhaabilee deeggartoota fayyaa biroof rakko/sababaa hawwan karoora maatii akka adda kutan godhee jadhamee adda bahu ka'umsaa godhachuun tarkaanfii sirreeffamaa fudhachuuf kan fayyaduudha.

Adeemsaa fi turtii qoranichaa: Qoranichi haawwan ulfaa irratti kan geggeeffamu ta'ee, waliigala gaafilee 38 kanan of harkaa qabu ta'ee gaafilee kana haati kan deebistu ta'a. Walumaagalatti qoranichi haadha tokkoof naannoo daqiiqaa 30 ni fudhata. Kanaaf qorannoo kana akkaan gegeessuf akka naaf heyyamtan isin gaafadha.

Faayidaa fi miidhaa qoranichaa: Sababa qorannoo kanatti hirmaattaniif rakkoon guddaa isin irra gahu hin jiru, yeroo keessan muraasa isin irraa fudhachuu keenyaan alatti. Faayidaa kallattiin sababa hirmaannaa keessaniin argattan hin jiru. Garuu odeeffannoon isin kenitan fi bu'aa qorannaa kanaa karoorsitoota fayyaa sadarkaa sadarkaan jiraniif galtee guddaa taha.

Iccitii eeguu: Ragaan isin nuuf kennitan iccitiin qabama. Kallattiin wanti addatti isin calaqqisu/ibsu asirratti barreeffamu hin jiru. Bu'aan qorannoo kanaa ummata naanoo kanaa akka waliigalaatti malee addatti hirmaattota kan calaqqisu miti. Deebiin keessan yommuu galmeeffamu

maqaa keessan hin dabalatu, afaaniinis tahe barreeffamaan wantii hirmaattota addatti ibsu danda'uu yookiin qorannoo kana keessa hirmaachu keessan ibsu ykn walitti qabatu hin jiru.

Mirga: Hirmaannaan fedhii keessan irratti kan hundaa'e dha. Qorannoo kana irratti hirmaachuuf murteessuu yookiin dhiisuu dandeessu. Hirmaachuuf murteessitan illee yeroo barbaaddan qorannoo kana addaan kuttanii bahuuf mirga guutuu qabdu. Sababa kanaan faayidaa isin argachuu qabdan kan dhabdan hin jiru. Gaafii isini deebisuu hin barbaanne yoo jiraate deebisuuf dirqama hin qabdan.

Teessoo: Gaafii ykn qeeqa qo'annoo kana ilaallatuu kamiifuu, teessoo armaan gadiin gaafachuu fi quunnamuu ni dandeessu

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lakk. bilbila mobayilii: (+251)-9-13-20-69-58

E-mayilii abebayehugirma7@gmail.com

Waajjira dhimma naamusaa qo'annaa fayyaa dhaabbatichaa (IHRERC) lakkofsa bilbilaa (+251) -0254662011 ykn lakk.Poostaa 235, Harar, Itoophiiyaa.

Ibsa fedhii hirmaataa qoranoo ta'uu ykn mirkaneessuu: Ibsa hirmaattota qorannoof kennamuu dubbiseera/ naa dubbifameera. Faayidaan qorannoo kanaa sirriitti naaf galee jira, akkaataa, rakkoo fi faayidaa akkasumas waa'ee iccitii eeguu, mirgaa hirmaataan qabu, akkasumas walquunnamtii kamuu barbaachiseef teessoon natti himameera. Waan naa hin galle gaafachuuf carraan naa kennameera.wayita kamiyyuu qorannoo kana addaan kutee bahuu akkan dandahu, akkasumas gaaffiin debisuu hin barbaanne deebisuuf akkaan hin dirqamne. Kanaafuu qorannoo kanatti fedhiin kan hirmaadhu ta'uu mallattoo koon nan mirkaneessa.

Maqaa guddiiftoota/maatii _____Mallattoo_____Guyyaa _____

Maqaa ragaa sassaabaa _____Mallattoo _____Guyyaa _____

Baayyee Galatoomaa!!

10. ANNEXES

Annex I: English Version Data abstraction Format

Questionnaire identification information **Date_____**

001 Questioner ID number_____

002 Name of Kebele_____ House No_____

003 Name of data collector _____ Participant signature_____

004 Name of supervisor_____, Signature_____

I. Socio-demographic characteristics			
S.No	**Questions**	**Response**	Remark
1	Age in complete years	_____	
2	Current marital status	1. Single/Unmarried 2. Married 3. Divorced 4. Separated 5. Widowed	
3	Educational status of the women	1. Can't read and write 2. Read and write 3. Primary school 4. Secondary School 5. Preparatory (11-12) 6. Diploma and above	
4	Educational status of the spouse	1. Can't read and write 2. Read and write 3. Primary school 4. Secondary School 5. Preparatory (11-12) 6. Diploma and above	If applicable
5	Place of residence	1. Urban 2. Rural	
6	Religion	1. Muslim 2. Orthodox 3. Protestant 4. Other (Specify)_____	
7	Ethnicity	1. Oromo 2. Amhara 3. Guraghe 4. Other (Specify)_____	

8	Your Current occupation	1. Housewife 2. Farmer/Agriculture 3. Trade 4. Private employee 5. Gov't employee 6. Other (Specify)_____	
9	Your spouse's current occupation	1.Farmer/agriculture 2.Trade 3. Gov't employee 4. Private employee 5. Other (Specify)_____	If applicable
II. Obstetric and Behavioral Related Characteristics			
10.	How many children do you have?	_____	
11	Who decide/ were decide/ on number of children you want to have?	1. Husband 2. You yourself 3. Both 4. Husband family 5. Other (specify)_____	
12	Who decide to use family planning?	1. Husband 2. You yourself 3. Both	
13	Did your husband support you when you were use family planning	1. Yes 2. No	
14	Have you ever had felt infrequent sex during you use/discontinue/ the method?	1. No 2. Yes	If No, just skip to Q. 16
15	If yes, what was the reason for the infrequent sex	1. Husband living away 2. Sexual discomfort 3. Health problem, other than Sexual discomfort 4. Other (specify)_____	

III. Information /Knowledge/ and counseling on Family planning

16	Have you ever heard of any methods that women can use to limit/space pregnancy?	1. Yes 2. No	If No, skip to Question number 19
17	If yes, from where did you get information about FP service	1. From neighbors 2. From health professionals 3. From health extension worker 4. From media 5. Other (specify)_____	Women may have multiple response
18	If yes, which methods of contraception have you heard about?	1. Injectables (Depo-Provera) 2. Pills 3. Implants(Jadelle, Implanon) 4. IUD 5. Other (specify)_____	Women may have multiple response
19	Did you get counseling service prior to using the method?	1. Yes 2. No	If No, skip to Question number 21
20	If yes, which content of counseling did you discussed about this methods?	1. Benefit 2. Duration of action 3. Effectiveness 4. Side effect 5. Other (specify)_____	Women may have multiple response

IV. Method Related Characteristics

21	Which method did you use?	1. Injectables (Depo-Provera) 2. Pills 3. Implants(Jadelle, Implanon) 4. IUD 5. Other (specify)_____	
22	Have you ever discontinued using family planning in the preceding 3 years?	1. No 2. Yes	
23	Time elapsed in using the method?	In Month_____	
24	Have you encountered (fear for) method failure (pregnancy) during family planning use?	1. No 2. Yes	
25	Have you faced any type of method inconveniency during family planning use?	1. No 2. Yes	
26	Have you had any side effect during method use/discontinuation/	1. No 2. Yes	If No, skip to Q. number 28
27	If yes, what type of health problem/side effect/ did you face?	1. Abnormal vaginal bleeding 2. Headache 3. Weight gain 4. Weight loss 5. Other (specify)_____	Women may have multiple response

28	Have you had decision to get pregnant while you use/discontinue the method	1. No 2. Yes	
29	Have you been in need of other more suitable method while you use/discontinue the previous one	1. No 2. Yes	If No, just stop here
30	If yes what was the method you switched to	1. Injectables (Depo-Provera) 2. Pills 3. Implants(Jadelle, Implanon) 4. IUD 5. Other (specify)_____	

Thank You!

Annex II: Afaan Oromo Version Data abstraction Format

Gaafata Odeeffannoo Eenyumaa **Guyyaa_____**

001 Lakkofsaa tartiiba/eenymmaa/ Gaafata _____

002 Aradaa/Ganda _____ Lakkofsa Mana_____

003 Maqaa sassaabaa odeeffannoo_____ Mallatoo Hirmaatoota_____

004 Maqaa too'ataa mirkaneessee_____ Mallatoo_____

I. Haala Hawaasuuma fi Diimoograafii			
Lakk.	**Gaaffii**	**Deebi**	**Yaada**
1	Umriin kee meeqa?	_____ (Waggadhaan haa ibsamu)	
2	Haala gaa'ila dubartii?	1. Kan hin heerumne 2. Kan heerumte 3. Kan hiikte 4. Kan adda deeman 5. Kan abbaa mana irra du'e	
3	Sadarkaa barnoota dubartii?	1. Dubbisu fi barreessuu hin dandeesu 2. Dubbisu fi barreessuu qofa 3. Sadarkaa 1^{ffaa}(1-8) 4. Sadarkaa 2 ^{ffaa} (9-10) 5. Barumsaa qopha`inaa (11-12) 6. Dipiloomaa fi isaa ol	
4	Sadarkaan barnoota abbaamanaa kanke?	1. Dubbisu fi barreessuu hin danda'u 2. Dubbisu fi barreessuu qofa 3. Sadarkaa 1^{ffaa}(1-8) 4. Sadarkaa 2 ^{ffaa} (9-10) 5. Barumsaa qopha`insa (11-12) 6. Dipiloomaa fi isaa ol	Yoo Abba mana qabaate
5	Iddoo jireenyaa kee eesaa?	1. Magaalaa 2. Baadiyaa	
6	Amantii dubartii?	1. Musliima 2. Ortoodoksii 3. Protestaantii 4. Kan biro ibsii_____	
7	Saba dubartii?	1. Oromoo 2. Amhaara 3. Guuragee 4. Kan biro ibsii_____	
8	Hojjiin kee maalii?	1. Haadhamanaa 2. Qonaan bultu 3. Daldaltuu 4. Hojjeetu dhaabata dhunfaa 5. Hojjeetu mootummaa	

		6. kan biro ibsii_____	
9	Hojjiin abbaamana kanke	1. Qonaan bulaa 2. Daldalaa 3. Hojjeeta mootummaa 4. Hojjeeta dhaabata dhunfaa 5. kan biro ibsii_____	Yoo Abba mana qabaate
II.	**Haala Obistaatrikii fi Amalaa**		
10	Baayina daa'immani kee meeqa?	_____	
11	Ijoolee meeqa akka horuu (qabaachu) qabdn kan murteessuu eenyu?	1. Abbaa mana 2. Ofii kiiyyaa/Hadha mana/ 3. Lamaan keenya/abbaa mana fi hadha mana/ 4. Maatii abbaa mana 5. Kan biroo(haa ibsamu)_____	
12	Karoora maatii fayyadamuuf eenyutu murteessa	1. Abbaa mana 2. Ofii kiiyyaa/Hadha mana/ 3. Lamaan keenya/abbaa mana fi hadha mana/	
13	Karoora maatii yeroo fayyadamtuu abbaamana kanke sii deeggaraa	1. Eeyyee 2. Lakki	
14	Yeroo karoora maatii fayyadamu dhaabdee/fayyadamaa turte/ keessaatti walqunamtii sala ittifuufinsaan raawwachu hanqiistee turte	1. Lakki 2. Eeyyee	Yoo deebiin **lakki** tahe, gara gaafii 16 dabri
15	Yoo eeyyee tahe, sababiin Ittifuufinsaan walqunamtii sala hin gaggeesineef maalii	1. Abbaanmanaa yeroof jiraachu dhabu 2. Walqunamtii salan gamachu/itti tolu/ dhabu 3. Rakko fayyaa lakk. 2ffaa alaa 4. Kan biroo(haa ibsamu)_____	
III.	**Haala Beekumsa/Odeeffannoo/ fi Marii Karoora Maatii**		
16	Umrii kee keessaati mala/toftaa/ dubartiin tokko ulfa dhaabuuf (ulfa adda faggeesuf) fayyadamu qabdu dhageese beektaa?	1. Eeyyee 2. Lakki	Yoo deebiin **lakki** tahe, Gara gaafii lakk. 19 dabri
17	Eeyyee yootahe, Eenyuraa dhageesse?	1. Olaa keetti irraa 2. Ogeessa fayyaa irraa 3. Hojatuu Ekisteenshiini fayya irraa 4. Miidiyaa irraa 5. Kaneen biroo (haa ibsamu)_____	Dubartiin deebii baayyee qabaachu nidandeessi
18	Eeyyee yootahe, waa'ee malaa karoora maatii isa kam faa dhageesse?	1. Kan lilmoon keennamu 2. Kan kiniinaa liqiifamu 3. Kan irree harka keessati awaalamu(Jadelle, Implanon) 4. Kan gadaameessa keessa kaa'amu 5. Kaneen biroo (haa ibsamu)_____	Dubartiin deebii baayyee qabaachu nidandeessi

19	Karoora maatii fudhachuu (fayyadamuu) kee duraa Marii fi odeeffannoo murteef si fayyadu ogeessa tajaajjiila siif keenne waliin taasiste jirta?	1. Eeyyee 2. Lakki	Yoo deebiin **lakki** tahe, Gara gaafii lakk. 21 dabri
20	Eeyyee yootahe, marii taasistan keessati odeeffannoo murteef fayyaduu waa'ee maalfa argate?	1. Faayyiida 2. Yeroo turtii tajaajjila (Duration of action) 3. Haama inni ulfaa ittisu (Effectiveness) 4. Miidhaa dalgee 5. Kaneen biroo (haa ibsamu)_____	Dubartiin deebii baayyee qabaachu nidandeessi

IV. Haala Mala fi Amalaa Karoora Maatii

21	Mala karoora maatii keessa isaa kam fayyadamaa turtee/jirta?	1. Kan lilmoon keennamu 2. Kan kiniinaa liqiifamu 3. Kan irree harka keessati awaalamu(Jadelle, Implanon) 4. Kan gadaameessa keessa kaa'amu 5. Kan biroo(haa ibsamu)_____	
22	Waggoota sadeen darban keessatti karoora maatii fayyadamuu adda kutee beektaa?	1. Lakki 2. Eeyyee	
23	Karoora maatii yeroo turtii hangamiif fayyadamtee?	Ji'aan _____	
24	Osoo karoora maatii fayyadamtuu (sodaa) ulfaa'u si mudatee beekka?	1. Lakki 2. Eeyyee	
25	Yeroo mala karoora maatii fayyadamtu si mija'aa tahu dhabun si muddatee beektaa	1. Lakki 2. Eeyyee	
26	Yeroo karoora maatii fayyadamtu /adda kutuu/ miidhaa dalgee /yaadoo fayyaa/ si mudate ture?	1. Lakki 2. Eeyyee	Yoo deebiin **lakki** tahe, Gara gaafii lakk. 28 dabri
27	Yoo eeyyee tahe, mallatoon miidhaa dalgee /yaadoo fayyaa/ maalfaa si mudate ture?	1. Laguun ji'a walqixaachu dhabu 2. Bowwoo mataa 3. Ulfaatinni qaama dabaluu 4. Ulfaatinni qaama xiqaachu 5. Kan biroo(haa ibsamu)_____	Dubartiin deebii baayyee qabaachu nidandeessi
28	Yeroo Karoora maatii fayyadamaa turte/adda kutuu/ murtee ulfa'u (daa'imma) barbaadu qabaacha turte?	1. Lakki 2. Eeyyee	
29	Yeroo Mala karoora maatii duraani fayyadamaa jirtu/adda kutuu/ mala karoora maatii isaa baayyee mija'aa taheti barbaada turee?	1. Lakki 2. Eeyyee	Yoo deebiin **lakki** tahe, asitii dhaabii
30	Yoo eeyyee tahe, Gara Mala karoora maatii isaa kamiitti jijjiratan?	1. Kan lilmoon keennamu 2. Kan kiniinaa liqiifamu 3. Kan irree harka keessati awaalamu(Jadelle, Implanon) 4. Kan gadaameessa keessa kaa'amu 5. Kan biroo(haa ibsamu)_____	

Galatooma!!

Annex III: CURRICULUM VITAE

Personal Profile

Name *Abebayehu Girma*

Sex *Male*

Place *Harar town*

Date of Birth *May, 15/1984 G.C*

Nationality *Ethiopian*

Marital status *Married*

Mobile *0913206958*

Email *abebayehugirma7@gmail.com*

Academic Back Ground

Level	**Name of school or institution**	**Location**	**Period**	**Field**
Elementary (1-8 grade)	Babile primary and secondary school	Babile Town		
High School (9-12 grade)	Medihanialem Secondary and comprehensive School	Harar City		
Certificate and diploma	Bale Goba Nursing school	Goba, Bale zone, Oromia region		Clinical Nurse
First Degree	Haramaya University	Harar City		Bsc. Nurse

Summary of Qualification and Work Experience

I am a Registered Nurse and licensed in Senior Nurse with 16 years in different governmental health institution (Health centers, District health office and Zonal health office) with work experience in different managerial, expert and coordinator positions at different levels as listed below:-

Work and Professional Experience (from recent to past)

- Family Health Process Owner at East Hararghe zone
- Family Health Process Owner at East Hararghe zone Jarso and Kombolcha Health Office
- Head at East Hararghe zone Jarso district health office

- HIV/AIDS at East Hararghe Zone, Melka Belo Health Office
- Malaria, Nutrition and TB/HIV at East Hararghe Zone, Melka Belo Health Office
- Health Center staff at East Hararghe Zone, Melka Belo district, Jaja Health Center.

Training (short course)

Training Topics	**Organization, Venue and Date**
Training on FP, SAM Management, TB control and prevention, Malaria control and prevention	
Master Trainers' Training (MTOT) on Implanon Next	By EMA with FMOH at Bishoftu, from January 7-10, 2017.
Master Trainers' Training (MTOT) on Social and behavior change communication	By JHU with ORHB at Adama, from November 2-7, 2016.
Comprehensive MNCH/PMTCT.	By CDC with ORHB at Haramaya University from June 9-21, 2016.
Supervisory skills Training	By Ipass Ethiopia with FMOH at Adama from June 22-25, 2015.
Master Trainers' Training (MTOT) on Community Based Newborn Care (CBNC).	By USAID/IFHP and ORHB at Babile, April 5-17, 2014
Master Trainers' Training (MTOT) on Integrated Refresher Training (C-MNCH).	ZHB, Babile March 24-April 4,2015
Master Trainers' Training (MTOT) on Meningitis.	FMOH, at Adama October 1-3,2015.
Masters Trainers' Training (MTOT) on Respectful maternity care (RMC)	FMOH with EMA/transform PHCU at Adama November 19 – 22, 2018
Training on zonal level management standard (long term ongoing training)	Yale global health leadership initiative with ORHB, at Harar Ended on October, 2018

Skills and Hobbies

- Language skill
  - ✓ Oromifa:- listen, speak, write and read …….Excellent communication skill
  - ✓ Amharic; - listen, speak, write and read …… Excellent communication skill
  - ✓ English :- listen, speak, write and read ---------- Good communication skill
- Hobbies wondering
  - ✓ Scientific literature reading

- ✓ Reading Fiction and watching TV(especially sport programe)
- ✓ Active Participant in any discussion and civic associations

Reference

1. **Mr. Ahmed Aliyi:** East Hararghe Zone Health Office Family health coordinator. Cell phone 0911571879
2. **Mis. Fitsum Eshete:** East Hararghe Zone Health Office HR Directorate Director Cell phone 0921870014
3. **Mr. Abdulaziz Abdureman:** East Hararghe Zone Health Office Vice head Cell phone 0911039713