ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

ASSESSMENT OF BARRIERS OF BEHAVIORAL CHANGE TO STOP FGM PRACTICE AMONG WOMEN OF KEBRI BEYAH DISTRICT, SOMALI REGIONAL STATE, EASTERN ETHIOPIA.

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List of Abbreviations

AAU: Addis Ababa University

AOR: Adjusted odd ratio

BCC: Behavioral change communication

CI: Confidence interval

COA: Crude odd ratio

CSA: Central statistical agency

CSO: Civil service organization

SPH: School of Public Health

EDHS: Ethiopian Demographic and Health survey

FGM/C: Female Genital Mutilation/Cutting

FGD: Focus group discussion

IEC: Information, Education and Communication

MDGs: Millennium Development Goals

OWDA: ogaden welfare and development association

WHO: World Health Organization

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Abstract

Background: Among harmful traditional practices, Female genital mutilation/cutting (FGM/C) is widely practiced across the world. The practice involves either partial or total removal of the female external genitalia for various reasons. FGM is documented to be rooted in religious, personal and societal factors. The practice is documented to be widespread across Ethiopia and is believed to be widely practiced in Somali region.

Objective: To assess barriers of behavioral change to stop FGM practice among women of Kebri Beyah district in Somali region, where the high prevalence of FGM is documented.

Methods: A community-based cross-section study design was applied. Both quantitative and qualitative methods were employed to generate relevant evidence. A total of 633 households drawn from five randomly selected kebeles involved in the quantitative part of the study. Participants were purposefully identified and involved in the qualitative study. The survey data was analyzed by SPSS version 21. Multivariate analyses were carried out to examine the existence of a relationship between dependent and socio demographic characteristics. On the other hand, qualitative data were analyzed thematically and the result was presented in narration.

Results: This study revealed that 62.7% of the respondents have intention to circumcise their daughter in the future. Religion was the major reasons for the perpetuation of this practice. About 73.2% of circumcision was performed by traditional birth attendants. Eighty seven percent of participants responded that FGM was being practiced in that area. More than 79.9% of participants were undergone Sunni type of circumcision. Most 89.8% of respondents were found to have good knowledge about negative health outcome of FGM and 66.1% of respondents had negative attitude towards FGM. Literate women were less likely intending to continue FGM compared to illiterate women (AOR=0.58, 95% CI; (0.42-0.91)). Those who have television at home have less intention for continuation of FGM compared to those who have not television. (AOR=0.49, 95% CI: (0.36, 0.77))

Conclusion: The study shows that the intention to stop female genital circumcision was less in Kebri Beyah district. Most of women in this study have good knowledge about the negative health outcome and negative attitude towards FGM. Yet, the prevalence of FGM/FGC is still high in the study area. Most of them undergo Sunni (clitoridectomy) type of circumcision. Traditional birth attendants were the main operators of female circumcision. Intention of women to stop FGM showed association with

education status and television. Religious organizations should have to explain to the community that there is no religious justification for the practice of FGM. Local organizations, community and religious leaders should play major role in the process to bring good intention to stop FGM within the entire community by arranging training, workshops, media campaign, public speech and outreach for awareness creation programmers.

1 Introduction

1.1 Background

All societies have behaviors and norms based on age, life style, gender and social class. The norms often referred to as group-led beliefs about how the member behaves in a given context that may be beneficial or harmless but some may be harmful. However, culture is not static, it is a constant flux, adapting and reforming that people will change their behavior when they understand the hazards and indignity of harmful practices and when they realize that is possible to give up harmful practices [1]. Among harmful traditional practices, Female genital mutilation/cutting (FGM/C) is mostly practiced worldwide and affecting almost all ethnic groups. It involves various procedures either partial or total removal of the female external genitalia for non-medical reasons. It is deep-rooted traditional practice; this practice is rooted in religious, personal and societal beliefs within a frame of psycho-sexual and social reasons such as control of women's sexuality and family honor, which is enforced by community mechanisms [2, 3].

While reasons for the practice vary across cultural groups, social reasons may include FGM/C as an initiation act for girls into womanhood, as an act of social integration and for the maintenance of social cohesion, socio-economic reasons include beliefs that FGM/C is a prerequisite for marriage or an economic necessity in cases where women are largely dependent on men, Religious reasons rest on the belief that it is a religious requirement, Hygienic and aesthetic reasons for FGM/C include beliefs that the female genitalia are dirty and unsightly, and health reasons include beliefs that FGM/C enhances fertility and child survival. FGM/C may also be an important source of income for circumcisers [4].

Any type of FGM is considered as a violation of the human rights of girls and women, it is known to be harmful to girls and women in many ways; the removal of or damage to healthy, normal genital tissue interferes with the natural functioning of the body and causes several immediate and long-term physical, psychological and sexual consequences [5].

It is estimated that about 100–140 million girls and women worldwide have undergone FGM, and each year a further two million girls and women are at risk of this practice. It is performed on girls aged 4–12 years and in some cultures as early as a few days after birth or as late as just before marriage [6].

Most of the girls and women affected live in 28 African countries, but also in the Middle East and Asia. They are also increasingly found in Europe, Australia, New Zealand, Canada, and US, mostly among immigrants from cultures where FGM is a tradition [7].

The prevalence of FGM according to figures from African countries shows a prevalence of more than 70% in Burkina Faso, Djibouti, Egypt, Eritrea, Ethiopia, Guinea, Mali, Mauritania, Northern Sudan, and Somalia. However, there is great variation in prevalence between and within countries, reflecting ethnicity and tradition [4].

1.2 Statement of problem

Over the past decades, the traditional removal of vital and normal external genital tissue of girls (called female circumcision (FC) and female genital mutilation or cutting (FGM\C) has become a major concern, and there has been an international consensus to take all possible measures to abolish a practice that is internationally deemed as a serious human rights and public health problem that concerns all sectors of society [9].

FGM/C is a widely practiced in Ethiopian and it is one of the major socio-economic development problems of the country. The negative health implication of this practice increases the chance of maternal mortality during childbirth [10].

FGM is widespread across Ethiopia and is practiced in the majority of regions and ethnic groups. According to EDHS2005 the highest FGM practiced is the Somali region, the rate is 97.3% and the least is Gambela region 27.1% [11].

Yet 74.3% of Somali women believe FGM should continue, which is the highest percentage of women in any region in Ethiopia to think so. This is despite 60.9% knowing of the harmful consequences of FGM [12].

Ethiopia outlawed female genital mutilation in 2004, but still the practice is deeply rooted; the penalties for the practitioners range from a minimum of three months to a maximum of life in prison or monetary fines [14].

Laws can act as one tool to end the practice because they can empower the women and girls to refuse undergoing mutilation. Experts on the subject of FGM, states clearly “In some cases people are informed about the practice and are well educated but they cannot stand the belief that women can

live with their clitoris not cut." She adds that" the law is not meant to break up families and generations but "it sets the standards and informs what is morally right or wrong" [15].

It was commonly reported that most of those who went through the process FGM/C and the public at large claim to know about the problem entailed in FGM/C and disapprove the practice; Nevertheless, recent studies attest that despite relatively widespread awareness about consequences of FGM/C and disapproving attitude, four in five women reported to have circumcised their daughters. Besides, still there are mothers who come out proactively to support the practice in connection to sanitary reasons, to avoid shame and to respect cultures [12].

According to UNICEF report, Education is misleading factor to explain variation of FGM/C practice since the procedure takes place way before a girl is enrolled to school. Yet, it's important to note the fact that mother's level of education is believed to determine daughters FGM/C status [10].

A study done in Kersa Demographic Surveillance and Health Research Center field site revealed that, only one third of the respondents stated that they knowing of FGM being practiced in their community. Local healers were the main performers of FGM. Women knew about the negative reproductive health effects of FGM and also experienced these themselves. However, only a few had tried to stop the practice and the majority had taken no steps to do so. This may be attributable to the fear of becoming alienated from the cultural system and fear of isolation [19].

Among the Somali refugee community in Eastern Ethiopia, there was a considerable support for the continuation of the practice particularly among women. The findings indicate a reported shift of FGM from its severe form to milder clitoral cutting. More men than women positively viewed anti-FGM interventions, and fewer men than women had the intention to let their daughters undergo FGM, indicating the need to involve men in anti-FGM activities [13].

Several measures like IEC activities focusing on informing, promoting, motivating and teaching on FGM, workshops and seminars, community outreach, anti-FGM lessons in literacy schools, Religious education, media campaign and legal approach have been taken to bring about awareness on the harmful consequences of FGM and to put an end over the past decade at international, regional, and national levels.

In spite of these efforts, update reports reveal there was still widespread of FGM in Somali regional state. And this makes the study relevant and timely that plays important role to examine the barriers of behavioral change to stop FGM practice in this community.

1.3 Significance of study

When people lack an awareness of how their behavior affects their health and wellbeing, they have little reason to put themselves through the misery of changing the risk behaviors they have engaged in for many years. Although increased knowledge creates a precondition for change, yet additional communal or self-influences are needed to overcome the impediments to adopting and maintaining new behaviors. One of the main characteristics of FC is that even if each individual in the intermarried group thinks of abandoning the practice, no single individual acting alone can succeed [30].

In Ethiopia, there are a number of FC programmes underway. Including IEC activities programs, which is considered as essential steps for reaching behavior change in FGM, but there is no evidence as to whether or not these programmes have changed people's positive attitudes toward the practice of FC, the aim of this study is to identify the barriers of behavioral change to stop FGM practice. In addition to this, the study outcome will help policy makers, local government, public health practitioners and other interesting organizations to design appropriate intervention to stop FGM practice for the future female generation. Moreover, it serves as baseline for further researches.

2 Literature review

2.1 Historical overview of FGM

The historical roots of FGM practice are not known but it appears in the ancient Egypt during the time of Pharaoh's. The "FC" used in the 1980 mostly by western writers and it was indorsed by inter African committee (IAC), on traditional practices affecting health of women and children, because of severity and irreversible of the damage inflicted on the girl's body that has been termed FGM/C. This is currently the term used in all official documents of united and other international documents instead over the use of female circumcision [21].

There is also little that can be said with certainty about the origin of different types of FGM. It seems most unlikely that the practice spread initially from any single location. One possibility suggested by Seligman is that FGM in the African and Arabian area are derived from ceremonies enacted by the Hamito-Semitic inhabitants of the Red Sea Coast .As for infibulations, its distribution throughout the Sudan-Ethiopia-Somalia region might indicate a relation with the Cushitic. Although often perceived to be a Muslim practice there can be no doubt that FGM in Egypt, Sudan and Ethiopia dates from long before Islam or Christianity [23, 24].

The practice is primary found in area where there is high poverty, child mortality, illiteracy, poor sanitation and access to modern health care facilities. Religion, tradition, poor economic and social status of women are among the most common factors reported to play a role for the practice to continue and exist [22].

Although the damage to female sexual organ and their function is extensive and irreversible, yet the true magnitude of the problem is still underestimated due to limited information and mystery of the practice [25].

This practice is considered as one of major international and national problem as it does not only affect the physical, mental and social life of women but also socio-economic development of many countries [10].

2.2 Female circumcision globally

FGM/C is universally practiced all over the world. According to UNICEF report based on a survey completed by selected countries FGM is known to be prevalent in 27 African countries, Yemen and Iraqi Kurdistan where 125 million women and girls have undergone FGM. FGM/C is major public health issue, majority of women worldwide have under gone the procedure. It is practiced in one form or another, in around 40 countries, mostly in east and West Africa and also parts of Arabian Peninsula. As a result of migration from these areas it is now also practiced in Europe and Australia and united state of America [9].

The highest prevalence rates are in 30 African countries, in a band that stretches from Senegal in West Africa to Ethiopia on the east coast, as well as from Egypt in the north to Tanzania in the south. On the other hand Egypt has the world's highest total number with of women having undergone FGM, while Somalia has the highest prevalence rate of FGM although; estimates about the prevalence of FGM vary by source [10].

A study shows that the percentage of circumcised women was 99.3%, infibulations is the commonest type of circumcision used (75-78 %) Kenya 78 %, Eritrea 95.5 %, Egypt 97 %, Djibouti 98 %, Sudan 90 %, Ethiopia 70-90 % and the least prevalence countries including Uganda 5 %, Zaire 5 %, Togo 12%. The age of the circumcision performed varies from one community to other, it may be done during infancy or childhood or adolescent and at the time of marriage. It is thought that mainly performed between ages of 4-15 years average being 7.5 years, demographic health survey of respective countries [8].

2.3 Female circumcision in Ethiopia

The distribution of female genital cutting in Ethiopia varies depending on ethnic origin and region. The National Committee on Traditional Practices in Ethiopia carried out a national baseline survey to determine the prevalence of this practice. Some 44,000 people were interviewed in a study reaching 65 of Ethiopia's 80 ethnic groups (urban and rural) in all ten regions of the country. The results show that 72.7% of the female populations have undergone female circumcision. Regional statistics from the survey revealed that prevalence ranges from 27.1% in the Gambella region to 99.7% in the Somali region, and to more than 50% in the capital, Addis Ababa. Throughout the country, half of all women who have undergone FGM have had clitoridectomy, and the remaining cases have had their

clitoris and/or labia minora cut. Nationwide, 6% of females affected by the procedure have undergone infibulations. More than 80% of women in the Somali region are suffering as a result of infibulations, whereas the prevalence is 60% in Afar [27, 28].

A study conducted in JIGJIGA town revealed that the proportion of women who were genitally mutilated was 96% with 52% of them undergone the most severe type of FGM – infibulations. The rest 48% of women had undergone either FGM Type I or Type II, they were genitally mutilated but not infibulated [29].

A study conducted at national level is revealed that, the support for the continuation of females' genital mutilation decreased from 42.8% (no education) to 2.0% (higher education). It was also observed that the support for the continuation of the practice ranged from 76.0% (Somali) and 69.0% (Afar) to 13.3% (Dire Dawa) and 5.9% (Addis Ababa), respectively [30].

2.4 Knowledge and Attitude of FGM Practice

There are four types of female genital cutting generally categorized as; clitoridectomy (Sunni) type which involves the dissection and removal of the clitoral hood or fore skin of the clitoris; excision type which is more severe involving the total removal of the clitoral, partial or total removal of the labia minora (small lips) leaving the vulva open. Infibulations which is the crude form of gynecological operation involves excision and in this procedure the clitoris and the labia minora are removed, the inner wall of the labia majora excised or scraped to produce a raw surface [31].

All types of female genital mutilation involve removal or damage to the normal functioning of the external female genitalia and can give rise to a range of well documented physical complications. They are irreversible and their effects last a lifetime. Studies on health effects of FGM shown this practice has negative consequences for delivery, first sexual intercourse, and during menstruation. Studies on the psychological effects of FGM are scarce and need to be given due emphasis, given that FGM is one of the reported risk factors for post-traumatic stress disorder in women [32, 33, 34–38].

A study done in Sudan mentioned that 45 person of women interviewed and believed that as it is a good production because of it is promote cleanliness, and keep virginity, most of men and women were against and some of respondent were unaware that FGM/C is banned by law and some respondents thought FGM would increase their chance of marriage, while most of female were unsure

as to whether this would affect their chance of marriage, majority of male preferred to marry uncircumcised women, mothers were responsible in taking the decision, while grand mother and father were responsible in 52% and 25% of cases respectively. 94.2% of female aware of the complication caused by FGM, 50% of female especially the Muslim respondents claimed that FGM is recommended by their religious and 88.1% of women had negative attitude towards FGM practice [52].

According to source of genital mutilation affords young women status in their societies and assures that they will be acceptable bridges. This practice continues even though men who have had sexual intercourse with mutilated and intact women prefer the experience with later. Another factor that contributes to the continuation of the mutilation practice is that, the only autonomous profession open to women in many societies, are those of traditional midwife and circumciser [6].

According to study in entitled female genital mutilation a new challenge for health service; most children or women are circumcised by local women and traditional midwives often the intervention is part of cultural rituals that make the transition to womanhood and preparation for marriage (10).The highest rate of use of medical personnel to perform FGM can be found in Egypt (61%), Kenya (34%), and Sudan (36%), with rates of 9% and 13%, respectively, in Guinea and Nigeria. Similarly, 90% of FGM is performed in Guinea and Eritrea by traditional/ local healers [18].

Study done by Egyptian care society, show that 39 % of study women perpetuated FGM/C due to custom. 80 % believed that practice should continue. 15-20 % refuses to give opinion on FGM/C; about 60 % believed that FGM/C was religious practice. 72 % husbands prefer to wives to FGM/C. 45 % believes that it prevented adultery [6].

A study done in Bale zone revealed that 26.7% of the respondents had intention for the continuation of FGM. Religion, safeguarding virginity, tradition, and social values were the major reasons for the perpetuation of this practice [19].

The majority, however, are village midwives who either interested in their living by performing operation or enjoying a position of status in their village and able to wide considerable influence over women. The reason and the motivation why the practice is continue for allowing girls to undergo FGM/C given present for confusion, they are contradictory to each other and in contradiction of

biological facts. On the other hand, a study done in Hargeisa district revealed that 88.8% of the respondents were aware of the possibility of HIV transmission [2, 22].

About 47.9% of mother had favorable attitude to continue FGM were and with unfavorable attitude were 52.1% that is to discontinue the practice. The mechanism by which FGM might cause adverse obstetric outcomes is unclear, but they can be predicted according to the type of FGM performed; more severe complications are anticipated after type 2 than type 3 FGM. The presence of scar tissue which is less elastic than the perineal and vaginal tissue following the procedure would cause obstruction, tears, and/or a need for episiotomy [39, 40].

A World Health Organization study in six African countries revealed that the annual cost of FGM related obstetric complications amounted to $3.7 million and ranged from 0.1%–1% of government spending on health care for women aged 15–45 years; This poses a significant economic burden on poor countries, when forced to spend a huge amount of money on outcomes of a traditional non medical procedure [6].

A study done in jigjiga town revealed that Episiotomies occurred among 61% of women who were delivering for the first time and 28.1% of women delivering for the second time. The rates of instrumental and cesarean deliveries among the first-time deliveries were 6.6% and 3.1%, respectively; while they were 3.2% and 1.3% among the second-time deliveries, respectively. Among primi-parous 36.2% women reported having had complicated postnatal period; 22.5%, prolonged lab our; 10.3%, perineal tear and 9.8%, heavy bleeding. [29]. In addition to the above mentioned complications, FGM/C procedure has also the potential to transmit HIV and cause fistula.

In addition to the negative health consequences of FGM/C, it is vital to highlight that the practice reflects a gender inequality that establishes an extreme form of female discrimination. Progress towards its abandonment may therefore contribute to the empowerment of women (MDG 3), an improvement of maternal health (MDG 5) and a reduction in child mortality (MDG 4). Accordingly, for the good health and human rights of women and children, the United Nations has denounced all forms of the practice, rejecting any shift towards accepting milder forms as well as towards the medicalization of the practice [40].

2.5 Intervention to stop FGM/C

The first programme for the prevention of female genital mutilation (FGM), which started in the mid-1970s focused on promoting, informing, motivating and teaching on the adverse health effects of FGM, in order to break the taboo surrounding this harmful traditional practice. The efforts to stop practice of FGM, used information, education and communication (IEC) materials, such as leaflets, booklets, training manuals and guidebooks for professionals. These IEC activities were often conducted with a focus on awareness rising rather than behavior change and thus focused on short time results, since behavior change takes time [3].

Health education intervention had a positive impact on the attitude of women towards FGM. However, for sustainable behavioral change that will lead to end FGM practice placing FGM elimination efforts within a comprehensive development strategy and larger context of reproductive health is needed [67].

While the provision of continued and informed care for women who have been affected by FGM/C is crucial, the key to improving the health and lives of women at risk rests in the numerous prevention and eradication strategies that have been implemented worldwide in an attempt to bring the practice of FGM/C to an end. Some have proven more effective than others [41].

Changing behavior to FGM (or any other undesired practice such as smoking or the practice of unsafe sex which might lead to HIV infection) requires a particular approach. To better understand this process of behavior change, several theories have been developed that explain individual or community behavior change [42].

BCC is also used to promote, sustain and maintain individual, community and societal behavior change; it is recognizes that skill building might be needed in order to sustain the change in behavior, for example on how to resist pressure, and how to establish community support [44].

Recent developments in communication recognize the need to move beyond top-down communication towards horizontal and participatory approaches. Such approaches incorporate the concept of enabling environments (e.g. breaking the taboo/silence) and contextual factors (e.g. pressure of grandmother to excise a girl) and are framed by the concept of communication for social change [45].

While legal and political measures are fundamental to ending FGM/C, community based eradication and prevention initiatives in conjunction and consultation with NGOs have now become a key component of campaigns worldwide. “While government action is necessary to create a political and legal environment that deters people from practicing FGM/C, it is ultimately the women, their families and their communities who must be convinced to abandon the practice”[15].

FGM is a dangerous and potentially life-threatening procedure to with women and girls in many countries are subjected has been viewed as a human right violation in many countries. More recently, parliamentarians from all over Africa met in Dakar, to push for a continent-wide ban on FGM and calling on UN to pass a general assembly resolution appealing for a global FGM ban, as it violates human rights they argued members of parliament from African nation also exchange lessons learned and action to take to achieve the ban and resolution some 17 African states have banned FGM, among them Ethiopia, Burkina Faso, Togo, Senegal and Uganda [10].

Programmatically, there are a number of institutions that are engaged in the fight against FGM/C in Ethiopia. These institutions have joined hands by establishing networks against FGM/C. there are more than forty six local CSOs that have one or more FGM/C focused intervention. Despite this the persistence of FGM/C is believed to be associated with individual, social and cultural factors, interventions were not particularly focused. This may also affected the whole endeavor of stopping the practice of FGM/C [17]. For instance Kembatta menti gezzime (KMG) is an Ethiopia- based indigenous human right and development NGO that envisions a society where women are free from all forms of discrimination and violence and where they are able to attain justice, equity and equality for themselves, their families and their communities [12].

3 Objectives

3.1 General objective

- To assess barriers of behavioral intention to stop FGM practice among women of reproductive age group in Kebri Beyah district

3.2 Specific objectives

- To assess level of Knowledge of women towards FGM practice
- To describe the level of attitude to and practice of FGM among women
- To assess intention of women towards FGM practice
- To identify preference of setting and means of communication of information related to FGM

4 Methodology

4.1 Study area

The study was conducted in Kebri Beyah district, Fafaan zone, Somali Regional State of Ethiopia, which is located in lowland part of Eastern Ethiopia It is located at 50 kilometers east of Somali regional state capital city (Jigjiga). Based on CSA2007 population of Kebri Beyah district were 165,518 in which 89,703 were men and 75,815 were women [48] and it composed of 29 kebeles. It has six health center and 27 health post. It is selected since various ethnical group exist that manifest cultural diversity which may contribute valuable information. A widespread practice and considerable support for the continuation of the FGM practice were also reported [13].

4.2 Study design and period

A community based cross-sectional study with quantitative and qualitative methods was conducted among women of reproductive age groups at Kebri Beyah district from August 2014 to June 2015.

4.3 Source population

The source populations were all women of reproductive age group living in Kebri Beyah district.

4.4 Study population

The study participants were women who met the inclusion criteria.

4.5 Inclusion criteria

All women of reproductive age group (15-49years old) in the district

4.6 Exclusion criteria

- Critically sick
- Mentally ill
- Unable to hear

4.7 Sample size determination

The sample size was determined by using a single population proportion formula and calculated by Epi info.

$$N = \frac{(Z\ \alpha/_2)^2 p\ (1 - p)}{d^2}$$

Assumption: In order to obtain adequate sample size

P = Expected proportion of behavioral change 50%;

Since there was no previous studies that estimate the level of change in FGM practice in connection to behavioral change.

$Z\ \alpha/_2 = 1.96$ of significance $\alpha = 0.05$, d= the margin of error was 0. 05

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

= **384**

Contingency 10 % for refusal and absenteeism was added. **384+10%*1.5= 633**

Design effect was considered 1.5.

4.8 Sampling procedure

A total of 633 households sample were selected out of 12,863 households in the district by using Multi- Stage Sampling procedure;

- All 29 kebeles of Kebri Beyah districts were grouped into five categories based on their direction(location)
- From each category, one kebele was selected randomly based on the resources in our hand by using simple random sampling by lottery method
- The total sample size was distributed to the selected five kebeles proportional to their total households

- From each kebeles households, households were selected using systematic sampling until the allocated sample size achieved
- Individual aged 15-49 years old in the households were randomly selected for interviewed
- When there was more than one reproductive age women in one household only one person was selected randomly
- If the specified age was not found in the household or not available that time three repeated visit were made, then the nearest household was replaced.

Purposive sampling technique was utilized for qualitative approach.

4.9 Data collection procedures

4.9.1 Quantitative method

Data was collected by ten trained female local data collectors who completed grade 10 and had previous experience in data collection using face to face interview administered questionnaire which was developed from reviewing others studies and modified according to variables then translated into local language (Somali). Three days of training was given for data collectors and supervisor on collection technique and objective of the study, Questionnaire, sampling methods and securing informed verbal consent form the study participants at Kebri Beyah by investigator.

The questionnaire used in this survey was addressed socio-demographic characteristics of respondent, knowledge related to FGM, types and side effect of FGM, sources of information to stop FGM, preferred settings (home, health institution, religious organization and community base organization) and means of communication (drama, song, news and discussion), attitude and intention to stop FGM practice as well as to identify barriers to stop FGM practice. And eight questions were asked to assess knowledge of FGM and correct answer was given score 1 while incorrect answer was given score 0. The score varied from 0-8. The sum was computed and those who scored above the mean were labeled as having ‘good knowledge’ while those who score below mean labeled as ‘poor knowledge’. And to assess attitude five questions were asked and score were given by using liker scale and those respondents above the mean labeled as “positive attitude” were as below mean is labeled as “negative attitude”.

Choice	Positive	Negative
Strongly agree	5	1
Agree	4	2

Neutral	3	3
Disagree	2	4
Strongly disagree	1	5

Measuring an intention for this study, Seven questions were presented to the study participants and those have no plan to circumcise their daughter in the future were consider as “intention to stop FGM” while those planned to circumcise were labeled as “intention to continue FGM” The respondents were interviewed at home by interviewers and the data collection process based on self-report and no inspection of genitalia was performed.

The questionnaire was pre-tested on 10% of total sample size at other kebeles & the necessary arrangements & corrections were made to standardize & ensure its validity.

4.9.2 Qualitative method

Focus group discussion (FGD) was conducted to obtain deep information related to; participant’s knowledge on FGM, sources of information for positive behavioral change, altitude and intention to stop FGM and finally to suggest any means that bring positive behavioral change to stop FGM practice. A total of three FGD session (two for women separately and one for community leaders) were hold for 60minutes for each session with ten participants for each session and moderated by principal investigator with assistance of trained note taker and tape recorder and later transcribed. The discussion was held in private setting and quit environment. Semi structured topic guide was used to guide the discussion.

4.10 Data quality management

Before embarking upon data collection, pretest was conducted in another kebele to ensure the validity of the survey tool & to standardize the questionnaire. Supervisors & the principal investigator were made frequent checks on the data collection and each discussion was taken note and tape recorded. Finally, the investigator transcribed the tape record after each section.

4.11 Data Analysis

Quantitative data was entered and cleaned by using Epi data version 3.11 and analyzed by using SPSS version 21 package. The data was coded on pre arranged coding sheet by the principal investigator, after all the necessary data collected and checked their completeness. Descriptive statistics were used to calculate the mean and standard deviation for continuous variables and frequency for categorical variables. Bivariate analysis was used to see the relationship and effect of the identified factors on FGM prevention with their crude OR association. Multivariate analysis were performed to see the effect of independents variables on dependent variables while controlling effect of others.95% C.I with Adjusted odds ratios were used to interpret the result. The qualitative data, the different ideas in the text were merged in their thematic areas based the objective of the study, and a thematic analysis was employed manually. Then, the result was presented in narration by triangulating the quantitative finding.

4.12 Variables

4.12.1 Dependent variable

- Knowledge towards FGM
- Attitude towards FGM
- Intention towards FGM practice

4.12.2 Independent variables

Socio demographic characteristics

- Age
- Marital status
- Religion
- Educational status
- Occupation

Communication factors

- Source of information
- Type of information

- Frequency of information
- Means of communication

Family factors

- Number of children
- Type of child
- Decision about FGM

Community enforcement

- Social pressure
- Society norms
- Legal action
- Fear of divorce
- Stigmazation

4.13 Operational definitions

- **Barriers** – Factors considered by the individuals to be obstacles to sop FGM practice.
- **Knowledge**- range of information stored in the memory regarding FGM/C
- **Attitude** – Individuals' predisposition to respond in a favorable or an unfavorable manner towards the prevention FGM.
- **Practice**- an overt behavior or habit of women towards FGM and being circumcised is evidence for FGM practice.
- **Intention** – The women's plan to carry on with practice by subjecting their own daughter to FGM in the future.
- **FGM types** : There four types of FGM according to WHO classification Type I (clitoridectomy), Type II (removal of clitoris and labia minora), Type III(infibulation) and Type II (incising, scraping and cauterizing the genital area.), and It's also classified into two types broadly Sunni and pharaonic

4.14 Ethical consideration

Ethical clearance was obtained from the ethnical clearance committees of the School of Public Health, AAU. Official letter was written by School of Public Health to Somali Regional Health Bureau and other concerned bodies to allow implement the study. The objective and importance of the study was explained & informed consent was obtained from each participant. Privacy and confidentiality was maintained at all levels of the study. Participant's who were unwilling to participate in the study & those who went to quit from the study at any juncture were informed to do so without any restriction.

4.15 Communication of results

The result of this study was presented to school of public health as part of MPH thesis & also disseminated to District health office, Regional health bureau and to other interested and concerned bodies. The results were attempted to publish on both local and international journal.

5 Result

5.1 Socio-demographic characteristics of respondents

A total of 633 households were planned for study and 620 households were successfully interviewed with an overall response rate of 98%.

Most of the respondents 261(42.1%) were in age group of 15-24 year and 244(39%) were in age group 25-34. The mean age of study participants was 27.14 ± (7.67) years, with minimum and maximum value 15 and 49 years, respectively. The majority of the respondents, 576 (92.9%) were Muslim, while 27(4.4%) were orthodox.

Majority of respondents were Somali, 513 (82.7%) followed by Amhara, 50(8.1%), Oromo 48(7.7%) and others 9(1.5%). Finding on marital status, shows that 403 (65%) of respondents were married, while 151(24.4%) were single.

Education accomplishment of participant shows that nearly, 343(55.3%) were unable to read and write, while, 146 (23.5%) could read and write and 86(13.9%) had elementary school education. Occupational status of the respondents shows that 286(46.1%) were housewife, 195(31.5%) were farmer, 76(12.3%) were Student.

Findings on ownership of radio and television shows, 463 (74.7%) were found to have radio while 295 (47.6%) had television at household level to access FGM related information. Characteristics of the respondents were summarized as follows:

Table 1: Socio-demographic characteristics of respondents, Kebri Beyah district, May2015, (n=620)

Variable	Frequency	%
Age group(years)		
15-24	261	42.1
25-34	242	39
35-49	117	18.9
Religion		
Muslim	576	92.9
Orthodox	27	4.4
Protestant	17	2.7
Ethnicity		
Somali	513	82.7
Oromo	48	7.7
Amhara	50	8.1
Others	9	1.5
Marital status		
Single	151	24.4
Married	403	65
Divorce	54	8.7
Widowed	12	1.9
Literacy		
Can't read and write	343	55.3
Can read and write	146	23.5
Grade 1-8	86	13.9
Grade 9-12	45	7.3
Occupational status		
Farmer	195	31.5
House wife	286	46.1
Civil servant	25	4
Daily laborer	38	6.1
Student	76	12.3
Radio		
Yes	463	74.7
No	157	25.3
Television		
Yes	295	47.6
No	325	52.4

5.2 Communication related to FGM prevention

Four hundred thirty nine (70.8%) of respondents heard FGM messages on radio. Among this, most of the respondents 169(38.4%) listened FGM at least once in two weeks in three weeks on radio, followed, at least once in two weeks, 100(22.7%).

Two hundred sixty one (42.1%) of respondents heard FGM messages on television. Among this, 89(34.1%) were watched television at least once in two weeks in three weeks, followed by, 54(20.7%), at least once in two weeks, 52(19.9%). Four hundred forty three (71.5%) of respondents have not read printed materials related to FGM for the last four weeks.

Table 2: Communication towards FGM messages in Kebri Beyah district, May2015

Variable	Frequency	%
Ever heard FGM on radio		
Yes	439	70.8
No	181	29.2
How often heard FGM on radio (n=439)		
At least once a week	54	12.3
At least once in two weeks	100	22.7
At least once in two weeks in three weeks	169	38.4
At least once in three weeks in four weeks	73	16.6
Others	43	9.8
Ever watched FGM on television		
Yes	261	42.1
No	359	57.9
How often watched FGM on television(n=261)		
At least once a week	54	13.8
At least once in two weeks	89	20.7
At least once in two weeks in three weeks	52	34.1
At least once in three weeks in four weeks	30	19.9
Others	36	13.8
Read printed materials		
Yes	177	28.5
No	443	71.5

5.3 Knowledge of women towards FGM

Five hundred ninety five (96%) of respondents mentioned FGM have complication. Two hundred ninety two (49%) know that FGM cause HIV/AIDS to females. 497 (83.5%) of respondents mentioned FGM cause excessive bleeding, 475(79.8%) of participants believed that FGM cause difficult of lab our during child birth.

"I experienced various problem during menstruation I feel sever pain and the blood doesn't come out properly and on my first delivery, I developed prolonged lab our and infection." (26 years old married woman)

Almost 387(62.4%) of respondents have learned something about FGM for the last 12months. Among this 160(41.3%) learned about the impacts of FGM, 136 (35.1%), learned about how to prevent FGM and 89(23%) learned about types of FGM.

*"FGM is a long period standing traditional practice and most of people classify into two types Sunni (removal of the tip of the clitoris) and phraonic (removal of prepuce), it's religiously recommended as well as culturally required, so that majority of this community respect and practice FGM."(*29 years old married woman).

About 500(80.6%) of respondents reported FGM negatively affect the future sexual relation of women. And 503(81.1%) of respondents thought that FGM is harmful tradition and should be stopped. Among this 259(52.5%) considered health education were the possible means to stop FGM, followed 207(41.1%), legal action and 28.5%

Almost half of the respondents, 313(50.5%) perform FGM for religious purpose, followed, 229(36.9%) for culture, 74(11.9%) to ensure virginity. Computing the knowledge score of study participants, 557(89.9%) has good knowledge, while the remained 63(10.2%) have poor knowledge regarding to FGM

A 25years old unmarried women claimed that "FGM is religious recommended and mandatory so we are expected to perform because there is various hadith that commend us to practice, the following hadith to argue that it is required as part of the Sunnah or Tradition of the Prophet: 'Um Atiyyat al-Ansariyyah said: A woman used to perform circumcision in Medina. The Prophet (pbuh) said to her: Do not cut too severely as that is better for a woman and more desirable for a husband's."

41 years old married woman also stated the following reason, *"I believe that FGM practice whether it's sunni or phraonic because I inherited from my grandparents. I consider as mandatory according to my religion and it's also one of my cultural identities that I should have to maintain."*

Table 3: Knowledge related to FGM in Kebri Beyah district, May2015.

Variable	Frequency	%
Learned anything about FGM for last 12 months		
Yes	387	62.4
No	233	37.6
Learned (387)**		
Types of FGM	140	95.3
Impacts of FGM	142	94
Prevention FGM	95	63.8
Know types of FGM		
Yes	447	72.1
No	173	27.9
FGM cause complication		
Yes	595	96
No	25	4
FGM cause difficult during lab our		
Yes	475	76.6
No	145	23.4
FGM cause bleeding		
Yes	497	80.2
No	123	19.8
FGM affect future sexual relation		
Yes	500	80.6
No	120	19.4
FGM cause HIV/AIDS		
Yes	292	47.1
No	328	52.9
FGM is harmful should be stopped		
Yes	503	81.1
No	117	18.9
Knowledgeable		
Good	557	89.8
Poor	63	10.2

**Total exceeds 100% due to multiple responses

Most of participants divided FGM into two types; Sunni (gudniinka sunniga) and pharaonic (gudniinka fircooniga). Several reasons are used to justify FGM practice, religious and custom are the commonest reasons for FGM practice. In addition to this, there is also an expectation that men desire to marry only circumcised women, while virginity and an intact hymen is given high respect and considered as marriage prerequisite and most of them know the negative health effects of this practice and some of them have experienced these problem.

5.4 Source of information to increase knowledge related to FGM

The commonest source of information that helped the participants to increase their FGM related knowledge were health professionals 242(59.9%), followed by, religious leader 121(30%) and radio 120(29.7%).

*"I have seen Community leaders and other organize public speech and outreach activities, sometimes in market and public area to create awareness on harmful effect of FGM to bring positive behavior to the community."(*19years old unmarried woman)

Table 4: Source of information to increase knowledge related to FGM in Kebri Beyah district, May2015

Variable	Frequency	%
Source of information		
Family	116	28.7
Peers	109	27.5
Religious leader	121	30
Health professionals	242	59.9
Radio	120	29.7
Television	27	6.7
Teacher	62	15.3
Anti- FGM clubs	87	21.5

**Total exceeds 100% due to multiple responses

5.5 Preference of settings and means of communication of information related to FGM

Three hundred forty eight (75%) preferred health institutions for adoption of positive behavioral change. while, 199(42.9%) were preferred religious organization and 95(20.5%) were preferred community based organizations.

Most of the study subjects 226(53.7%) mentioned drama as best means of delivering information related to FGM to bring positive behavioral changes. while 197(46.8%) were preferred group songs and 138(32.8%) preferred public speech.

For instance a 26years old woman indicated that, *"I heard FGM related massages like, FGM stories, drama and songs were broadcasted on radio once in every two or three weeks. I also heard few religious leaders give public lecture on Friday prayer (qhudba) to confirm female circumcision particularly pharaonic type is not recommended in Islam."*

Table 5: Preference of settings and means of communication about FGM information in KEBRI KEYAH district, May 2015

Variable	Frequency	%
Preference of setting to obtain information**		
Health institution	348	75
Religious organization	199	42.9
Community-based organization	95	20.5
Schools	65	14
At home level	40	8.6
Preference of means of communication **		
Song	197	46.8
Drama	226	53.7
News	37	8.8
Speech	138	32.8
Discussion	132	31.4
Others	24	5.7

** Total exceeds 100% due to multiple responses

5.6 Practice of FGM among women

Majority of study participants 542(87.4%) reported FGM is currently practiced in their community, while 483(89.1%) of respondents have undergone FGM themselves. Among those undergone FGM, 265(54.8%) were circumcised at age 5-9 years, followed by, 149(30.8%) who were circumcised at age10-15 years. Most of the respondents reported to have gone through Sunni type of circumcision 386(79.9%) and the remaining 97(20.1%) were subjected pharaonic type.

More than half of respondents, 312(73.2%) reported that traditional birth attendants were the main circumciser, followed by, 252(59.3%), village women and 67(15.7%), health professionals. Commonest type of instruments used to perform FGM were blade razor 395(79.5%), followed, knife 197(40.5%), and scissor 95(19.6%).

*"The traditional birth attendant's were circumcising our daughter by unhygienic procedure in our home and this increase the risk of infection and other sever disease."(*32 years old married woman).

And most of respondents 357(65.8%) reported that mother decide to perform FGM to their daughters, followed by, 153(28.2%), father and 32(5.9%) for both mother and father.

Table 6: Practice of FGM among women in Kebri Beyah district, May 2015

Variable	Frequency	%
Presence of FGM in the village	542	87.4
yes	78	12.6
No		
Circumcision status (n=542)	483	89.1
Yes	59	10.9
No		
Age at circumcision(years) (n=483)		
1-4	69	14.4
5-9	265	54.8
10-15	149	30.8
Type of circumcision		
Sunni	386	79.9
Pharaonic	97	20.1
Performed by**		
Traditional birth attendants	312	73.2
Village women	252	59.3

Health professionals	67	15.7
Others	17	4
Type of instruments **		
knife	197	40.5
Razor	395	79.5
Scissor	95	19.5
Others	24	4.9
Decision of FGM		
Father	153	28.2
Mother	357	65.8
Both	32	5.9

**Total exceeds 100% due to multiple responses

5.7 Attitude towards FGM

Majority of respondents, 418(67.4%) were agreed that FGM increase chance of marriage, 423(68.2%) were agreed FGM is religious requirement and should be maintained, 416(67.1%) were agreed FGM prevent premarital sex, 421(67.9%) were agreed uncircumcised women are out of social norms while 293(47.2%) were rejected women to actively participate anti FGM activities.

"I remember that, one of my friends has lost her future, because of she was not circumcised. Her fiancé asked her whether she was circumcised or not, one day before Nikah (engagement) and I realized that men desire to marry only circumcised women." (28 years old married woman)

*"Uncircumcised girl can't control her sexual desire and maintain her virginity until she gets married compared to circumcised girl, if she lose her virginity, she will lose her chance of marriage."(*42years old married woman)

Computing the attitude of study participants towards FGM, 410(66.1%) of respondents have negative attitudes, while 210(33.9%) have positive attitude toward FGM.

Table 7: Attitude towards FGM in Kebri Beyah district, May 2015

Variable	Frequency	%
FGM increase chance of marriage		
Strongly agree	281	45.3
Agree	137	22.1
Neutral	7	1.1
Disagree	62	10
Strongly disagree	133	21.5
FGM religious requirement		
Strongly agree	243	39.2
Agree	180	29
Neutral	9	1.5
Disagree	75	12.1
Strongly disagree	113	18.2
FGM prevent premarital sex		
Strongly agree	271	43.7
Agree	145	23.4
Neutral	9	1.5
Disagree	41	6.6
Strongly disagree	154	24.8
Uncircumcised women are Out of social norm		
Strongly agree	243	39.2
Agree	178	28.7
Neutral	12	1.9
Disagree	44	7.1
Strongly disagree	143	23.1
Women should actively participate anti FGM activities		
Strongly agree	83	13.4
Agree	180	29
Neutral	64	10.3
Disagree	240	38.7
Strongly disagree	53	8.5
Attitude score		
Positive	210	33.9
Negative	410	66.1

5.8 Intention among women towards FGM practice

Three hundred eight nine 62.7% of respondents have intention to circumcise their daughter in the future to maintain this practice. Three hundred seventy 59.7 were believed that circumcision make women physically clean and hygiene when compared to uncircumcised women. Regarding the

negative health effect of FGM, among the circumcised women 423(87.5%) of respondents were experienced negative health effects related to FGM. Among this, 333(78.7%) had low change of behavior to stop FGM, 62 (14.7%) indicated that they have no change, and 28(6.6%), had great behavioral change after encountered the negative effect of FGM.

There different reasons given by the participants to be continue the FGM practice for the future

"I believe, we inherited this practice from our mother's because it has its own importance and respect. Therefore, we have to maintain and transfer o next generation." (31 years married woman)

*"I have four daughters, I already circumcised the oldest one, and the remaining three are still too young to be circumcised but I plan to circumcise them in the future."(*27years old married woman)

Table 8: Intention to stop FGM practice in Kebri Beyah district, May 2015

Variable	Frequency	%
Change their believe after aweraness		
Yes		
No		
Circumcision make women physically clear and hygiene		
Yes	370	59.7
No	251	40.3
Experienced negative effect of FGM(n=483)		
Yes	423	87.5
No	60	12.5
Perceived change of behavioral(n=423)		
Great change	28	6.6
Low change	333	78.7
No change	62	14.7
plan to circumcise their daughter		
Yes	389	62.7
No	231	37.3

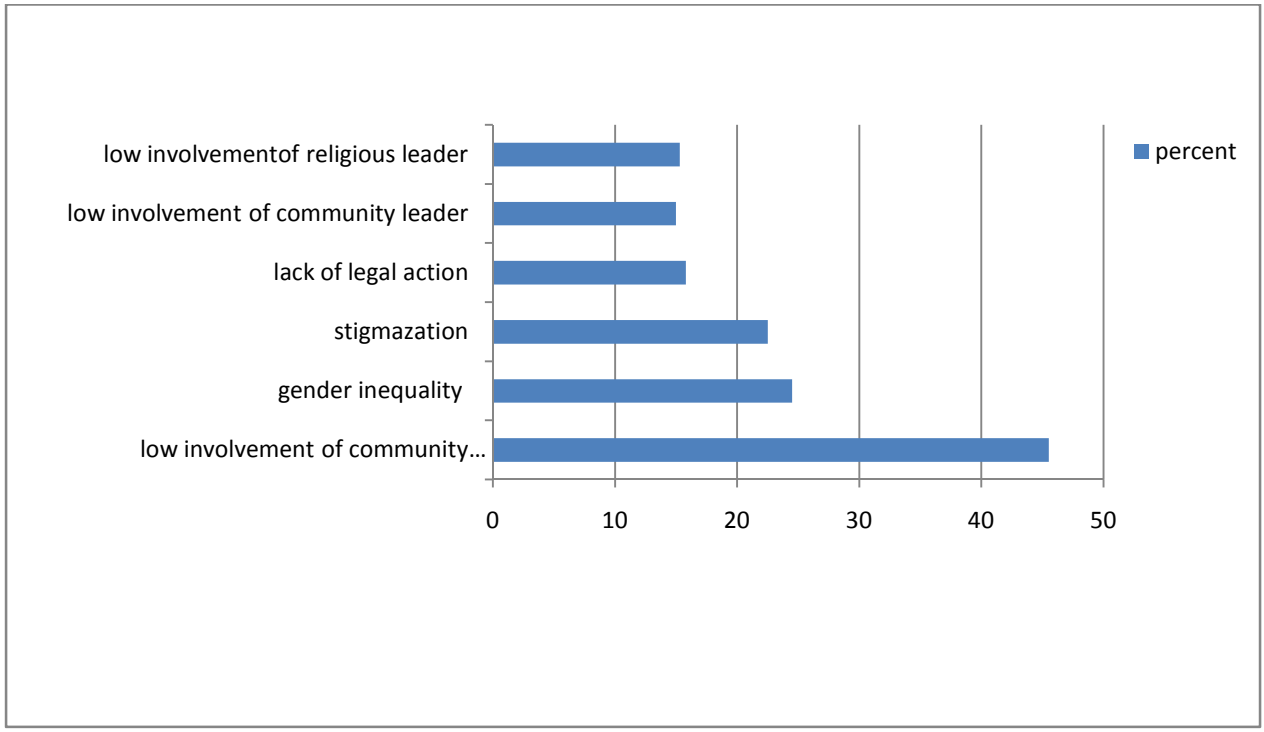
Two hundred eighty two (45.5%) of the respondents reported that the challenges to stop FGM were related to low involvement of community in FGM prevention and controlling programs, followed by, 152(24.5%) were due to presence of gender inequality,140(22.5%) were fear of social stigma and pressure, 98(15.8%) were lack of legal measure to stop FGM, 93(15%) were low involvement of

community leaders, 95(15.3%) were low involvement of religious leaders to bring desired change of behavioral towards FGM practice in the local community.

A36years old married women criticized *that "There is no doubt that IEC activities are only performed by only health workers and it is not holistic approach because, community members are not included."*

"Once, I was participated a training toward FGM awareness most of trainer criticized IEC work activities, it were not focusing on rural area where information gap exist, the rural people have not access to attend trainings and workshops which is important to bring positive behavioral." (35years old married woman)

Figure 1: Barriers of intention to stop FGM in Kebri Beyah district, May 2015



"I believe, we inherited this practice from our mother's because it has its own importance and respect. Therefore, we have to maintain and transfer o next generation." (31 years married woman)

"There is strong traditional that existed for long period of time and if the government ban all forms of circumcision (Sunni and pharaonic) through legal means it may develop conflict and that people

*think that, government is against their religion and tradition and this may put the administration at risk."(*19years old unmarried woman)

Suggestions of means of bringing positive behavioral change

Most of study participants are recommended; IEC efforts, religious leader mobilization, legal action, establishing Anti-FGM clubs, strengthening community participation, providing printed materials to rural area and women's active participation, while others, emphasize women's education to stop FGM practice.

> *"Religious leader should be mobilized and go to outreach to deliver messages relate to health effect of FGM and to correct the misunderstanding of that FGM is religious demanded, workshop should be designed to deliver information related to FGM prevention mechanisms to bring positive attitude to the community, establishing Anti-FGM committee consists of members of different sectors for instance; local administration, NGO, teachers, youth, women's origination, health care providers and religious leader and public discussion should be made to the community by using all forms of media channels (TV, radio and printed materials)."(*19years old unmarried woman)

> *"Anti-FGM clubs should encouraged by providing technical, material as well as financial support, strengthening community participation for each and every activities designed to stop and bring positive behavioral change towards FGM practice, and effective and smooth working relation with religious leader and local administration should be created."*(36years old community leader man)

> *"Legal measures are the only ways to stop FGM practice in our community because for the last five years different activities were conducted to create awareness about the negative health effect of FGM but some members of the community are still performing this practice therefore, those who are willing to FGM and those who are performing should be taken legal action in order to show this practice is legally prohibited."*(29years old community leader man)

*"Education is the only powerful tool that can bring positive behavioral change towards FGM prevention because the education status of female contributes great to her attitude whether to practice or to stop FGM."(*23years old married woman)

5.9 Relations of socio-demographic variables and intention for continuation of FGM practice among women of reproductive age group

Among the socio demographic variables; educational status and having television were significantly associated with intention for continuation of female genital cutting. It showed that odds of intending to continue FGM practice was 42% less among literate women compared to illiterate (AOR=0.58; 95% CI: 0.42, 0.91). Those who have television at home have 51% less intention to continue FGM practice than those who have not television at home (AOR=0.49; 95% CI: 0.36, 0.77).

In binary logistic regression; marital status, ethnicity and educational status were shown association with intention for continuation of female genital mutilation.

Table 10: Relations of socio-demographic variables and intention for continuation of FGM practice among women of reproductive age group in Kebri Beyah may 2015

Variable	Intention to practice FGM		Odd ratio	
	Yes	**No**	**COR**	**AOR**
Age group				
15-24	155(59.4%)	106(40.6%)	1.55(0.97-2.47)	1.25(0.76-2)
25-34	158(65.3%)	84(34.7%)	1.29(0.81-2.05)	1.22(0.75-1.9)
35-49	76(65%)	41(35%)	1	1
Religion				
Muslim	363(63%)	213(37%)	0.54((0.45-1.58)	0.86(0.33-2.23)
Non Muslim	26(59.1%)	18(40.9%)	1	1
Marital status				
Single	78(51.7%)	73(48.3%)	1.84(1.27-2.67)**	1.4(0.88-2.23)
Married	311(66.3%)	158(33.7%)	1	1
Ethnicity				
Somali	325(63.4%)	188(36.6%)	0.86(0.37-0.99)**	0.71(0.38-1.32)
Others	64(59.8%)	43(40.2%)	1	1
Occupational status				
Employed	39(61.9%)	24(38.1%)	1.04(0.6-1.7)	1.22(0.65-2.3)
Unemployed	350(62.8%)	207(37.2%)	1	1
Educational status				
literate	237(69.1%)	106(30.9%)	0.54(0.39-0.75)**	0.58(0.42-0.91)**
illiterate	152(54.9%)	125(45.1%)	1	1
Radio				
Yes	104(66.2%)	53(33.8%)	0.81(0.55-1.2)	0.75(0.5-1.13)
No	285(61.6%)	178(38.4%)	1	1
Television				
Yes	212(65.2%)	133(34.8%)	0.8(0.57-1.11)	0.49(0.36-0.77)**
No	177(60%)	118(40%)	1	1

** =significance **CI**= confidence interval **COR**= crude odds ratio **AOR**= adjusted odds ratio

5.10 Relation of socio demographic variables and knowledge of women towards FGM

Among socio demographic variables; only having television at home was shown that significant association with knowledge towards negative health effects of FGM. It was shown those who had television at home were 73% have good knowledge towards negative health effect of FGM compred to those have not television at home (AOR=0.27, 95% CI (0.13-0.55)).

Marital status, educational status, having radio and television at home were shown association with knowledge towards negative health effects of FGM under binary logistic regression.

Table 11: Relation of socio demographic variables and knowledge of women in Kebri Beyah may 2015

Variable	Knowledge		Odd ratio	
	Good	**Poor**	**COR**	**AOR**
Age group				
15-24	245(93.9%)	16(6.1%)	0.44(0.21-0.93)	0.61(0.28-1.33)
25-34	210(86.8%)	32(13.2%)	1(0.53-2)	1.14(0.57-2.26)
35-49	102(87.2%)	15(12.8))	1	1
Religion				
Muslim	514(89.2%)	62(10.8%)	5.18(0.7-38.3)	3(0.31-28.9)
Non Muslim	43(97.7%)	1(2.3%)	1	1
Marital status				
Single	144(95.4%)	7(4.6%)	0.36(0.16-0.8)**	0.54(0.23-1.27)
Married	413(88.1%)	56(11.9%)	1	1
Ethnicity				
Somali	455(88.7%)	58(11.3%)	2.6(1.02-6.64)	1.55(0.52-4.56)
Others	102(95.3%)	5(4.7%)	1	1
Occupational status				
Employed	61(96.8%)	2(3.2%)	0.26(0.64-1.12)	0.38(0.08-1.66)
Unemployed	496(89%)	15(12.8%)	1	1
Educational status				
Illiterate	294(85.7%)	49(14.3%)	3.13(1.7-5.8)**	1.9(0.99-3.67)
Literate	263(94.9%)	14(5.1%)	1	1
Radio				
Yes	423(91.4%)	40(8.6%)	0.55(0.31-0.95)**	0.78(0.43-1.4)
No	134(85.4%)	23(14.6%)	1	1
Television				
Yes	284(96.3%)	11(3.7%)	0.2(0.1-0.4)**	0.27(0.13-0.55)**
No	273(84%)	52(16%)	1	1

** =significance **CI**= confidence interval **COR**= crude odds ratio **AOR**= adjusted odds ratio

5.11 Relation of socio demographic variables and attitude of women towards FGM

The socio demographic variables did not show any significant association with attitude of respondents under multiple logistic regressions. Only ethnicity was shown association with attitude towards FGM under binary logistic regression.

Table 12: Relation of socio demographic variables and attitude of women towards FGM in Kebri Beyah may 2015

Variable	Attitude		Odd ratio	
	Negative	**Positive**	**COR**	**AOR**
Age group				
15-24	95(36.4%)	166(63.6%)	0.84(0.53-1.33)	0.93(0.57-1.5)
25-34	77(31.8%)	165(68.2%)	1(0.64-1.65)	1(0.65-1.69)
35-49	38(32.5%)	79(67.5%)	1	1
Religion				
Muslim	191(33.2%)	385(66.8%)	1.53(0.82-2.85)	1.1(0.5-2.3)
Non Muslim	19(43.2%)	25(56.8%)	1	1
Marital status				
Single	59(39.1%)	92(60.9%)	0.74(0.5-1.58)	0.8(0.53-1.2)
Married	151(32.2%)	318(67.8%)	1	1
Ethnicity				
Somali	165(32.2%)	348(67.8%)	1.53(1.11-2.3)**	1.41(0.83-2.4)
Others	45(42.1%)	62(57.9%)	1	1
Occupational status	23(36.5%)	40(63.5%)	0.88(0.51-1.51)	0.93(0.54-1.62)
Employed	187(33.56%)	370(66.4%)	1	1
Unemployed				
Educational status				
Illiterate	113(32.9%)	230(67.1%)	1.1(0.73-1.53)	1(0.69-1.43)
Literate	97(35%)	180(65%)	1	
Radio				
Yes	155(33.5%)	308(66.5%)	1(0.73-1.56)	1.11(0.74-1.64)
No	55(35%)	102(65%)	1	1
Television				
Yes	105(35.6%)	190(64.4%)	0.86(0.62-1.2)	0.87(0.61-1.25)
No	105(32.3%)	220(67.7%)	1	1

** =significance **CI**= confidence interval **COR**= crude odds ratio **AOR**= adjusted odds ratio

6 Discussion

This community based-cross sectional study has attempted to identify the barriers of behavioral change to stop FGM practice and their associated factors among women of reproductive age in Kebri Beyah district.

Our study finding showed that 62.7% of the respondents had planned to circumcise their daughter in the future. Our study findings, is also comparable to study from Tanzania revealed that 76% of the circumcised women were in favor of not performing FGM on their daughters, while 24% did, and in Guinea, support for the continuation of FGM was significantly higher among women 68% than among men 51%, indicating more attitudinal support for FGM discontinuation among men than women [61, 62].

The present finding shows that 89.8% of respondents have good knowledge about the negative health outcome of FGM, while 10.2% of the women have poor knowledge about negative health outcome of FGM. This finding is comparable with a study done in Addis Ababa which was 92% of women had good knowledge. On the other hand a study done in Somalia revealed that, about 66.9% of women had good knowledge on the effects of FGM [50, 56]. In contrast to our current findings, a study done in northwest Ethiopia shows that 46.2% of women had good knowledge about the ill health effect of FGM and 53.8% of the mothers had poor knowledge about the ill health effect of FGM [57]. This discrepancy might be due to the previous study was facility based study, while current employed a community based approach.

In our current study finding shows that, the most health effect more than 83.5% of respondents reported, FGM cause excessive bleeding, while 79.8%, difficult of lab our in addition to this infection, painful menstruation and painful sexual contact were also reported as negative effect of FGM. Similar study done in Somalia showed that, infection 60%, bleeding 20%, and 68% difficult of labour to be the main ill effect of FGM [53]. This is consistency with our study finding.

The current study revealed that, Attitude of women towards FGM practice was 33.9% have positive/unfavorable attitude towards FGM practice means less of them believe to continue FGM practice among their daughters and 66.1% have negative/favorable attitude towards FGM, this implies that majority of them believe to encourage FGM practice. Similarly a study done in eastern Ethiopia shows that, 47.9% of women have positive attitude, while 52.1% of women have favorable

attitude against FGM practice [57]. This discrepancy might be due to combination efforts from different stake holders against FGM in this region.

The present study revealed that 87.4% of women reported FGC was largely practiced in the study area because of social pressure and stigmazation towards uncircumcised women most of women circumcise their daughters. This finding is comparable with the other finding in Ethiopia which reported the prevalence of FGC among the women to be 98%, this shows the prevalence of FGC were still high in this area [49].

In our study findings, the type of FGM most commonly practiced was clitoridectomy (Sunni type), and a few women were also subjected infibulations (pharaonic) type, which is the most severe form of FGM. Our finding is similar with another study that revealed; almost half of all victims of FGM in Ethiopia had undergone clitoridectomy. Nationwide, 6% of females affected by FGM have undergone infibulation and more than 80% of women in the Somali region have been victims of the most severe form of FGM [19]. These findings are inconsistency with our study finding which shows, 20.1% had undergone the severe form of FGM (pharaonic type).These might be due to current anti-FGM intervention carried out in the area.

About 89.1% of interviewed women were subjected to FGM, almost all undergone the procedure before the age of 10years. FGM initiated at age between 5-9yaers and this finding is comparable to other surveys that have found 90% of girls who have undergone FGM aged 5–14 years, although practices vary from country to country, FGM are generally done among girls younger than 10 years. When subjected to the procedure, and another study shows that, half of cutting in Ethiopia, Mali, and Mauritania were initiated before age of 5 years, whereas in Yemen about 76% of cutting were started at not more than two weeks of age[1].

In this study, about 73.2% of respondents mentioned FGM procedures were performed by traditional birth attendants, mostly by using unhygienic procedures in the community, this increasing the risk of infection and later reproductive complications in women undergo FGM. And out present findings are comparable to the Ethiopia DHS 2000 report; more than 92% of the practices were performed by traditional circumcisers [6]. On the other hand, in some countries, medical personnel, including doctors, nurses, and certified midwives perform FGM under anesthesia in health care facilities, even though it is forbidden and subject to prosecution in the west. The highest rate of use of medical

personnel to perform FGM can be found in Egypt (61%), Kenya (34%), and Sudan (36%), with rates of 9% and 13%, respectively [49]. These findings were inconsistency with our present study findings.

Our current study shows that about 79.5% of the procedure was performed by using blade razor. This finding is consistency with other findings shows that, the cutting is mostly done with razor blades but some continue to use knives in the country side as in the old days when razors were not available in Somali region [22].

The present study found that religious requirement were the most common reasons for FGC practice among the study participants. FGM is performed for various reasons, including preventing women from hyperactivity in sexual practice and early initiation of sexual intercourse before marriage. This finding is in line with other findings were reported by 30% of Kenyan women who supported this practice to ensure virginity. Similarly, more than half of Egyptian women believed that FGM would prevent adultery and that it is proof of a girl's virginity and perceived that it improves marriage prospects for unmarried girls in Nigeria. This shows that traditional and religious reasons for practicing FGM are also widely accepted by females in the societies in different regions. However, the association between religion and FGM needs further research in Ethiopia. It is quite evident that the perception and acceptance of harmful traditional practices, including FGM, is widespread across all regions, regardless of religious practices [19, 53].

In this study about 49% of respondents perceived that FGM exposes a woman for HIV. Our finding is inconsistency with a study done in Hargeisa district, Somalia, revealed that 88.8% of the respondents were aware of the possibility of HIV transmission [22]. This discrepancy might be considered only women as our study subjects. Furthermore, there might be variation in accessing sources of information among these study subjects.

Many women still belief that the chance of uncircumcised women to be married is very low and they are directly or indirectly forced to circumcise their daughters or support the practice. In a traditional society like Ethiopia and Somalia, marital decisions are mainly made by men or by the parent of the girl. In such society, men prefer to marry circumcised women and mothers worry about their daughters thinking that an uncircumcised girl would not be married and becoming less attractive to men in terms of intactness, similarly a study in Eastern Ethiopia depicted the preference of men to be married to circumcised woman, this suggests that it would be very easy for women to abandon any

type of FGM, if the husbands do not expect it, indicating the importance of involving men in anti-FGM campaigns. Although men generally prefer to marry women who have undergone FGM, there are studies in some settings that have shown the preference of men to marry women who have not undergone the procedure [51].

Our study also attempted to ascertain women's feelings after experience serious outcomes of FGM which many women have faced various problems through out there life. 87.5% of women who had experienced the negative health effect of FGM, among these women, 78.7% of them developed low behavioral change while others approached it as a normal phenomenon and none had attempted to stop the practice in their community. Although, most of women had adequate knowledge about the potentially serious reproductive outcomes of FGM and this finding is comparable to other studies [46, 68].

In this study finding health institution were the preferred setting of communication and drama was the commonest means of delivering FGM related information and this finding is comparable to a study done eastern Ethiopia shows that Anti- FGM committee, health institutions and training on anti-FGM activities were mentioned as the major sources of information about possible immediate and long-term risks of health complications associated with FGM. Another study done in Nigeria also showed that exposure to multimedia campaigns had a significant impact on changing attitudes and promoting the intention to stop FGM, another study also revealed that radio and visual education material were the preferred channels to deliver information related to FGM to bring positive behavioral change [26, 63].

The identified challenges were lack of community participation in Anti FGM activities. Although various organizations are operating in this area, the community members were not incorporated the interventional activities to end FGM practice. In addition to this, lack of encouragement and commitment of community leaders inappropriate, IEC work, social pressure and stigmazation associated with uncircumcised women for considering that they are not eligible for marriage, Gender inequality, because women alone can't take action against FGM, due to their limited scope and dependence to their husbands. This finding is inconsistency with a study done in Somalia that show community member were given first priority, "community can create suitable solution for their own problem" and this might bring positive intention towards FGM practice [26].

The current finding shows that, socio demographic variables of this study have not shown significant association with attitude of women towards FGM practice. On the other hand our study findings indicate, among the socio-demographic variables, only educational status and having television at home were significantly associated with intention for continuation of FGM. Nowadays television became the most powerful tools for communication to advocate anti FGM programs. Having television at home was significantly association with knowledge of participants towards negative health effect of FGM practice. The educational status of women has significant association with intention for continuation of FGM. Similarly other studies were also shown that the level of education of women has a decisive role on the practice of FGM [51, 59]. This indicates that targeting the education of women is important in this population to end FGM.

7 Strengths and limitations of study

Strengths

Use of both quantitative and qualitative methods of data collection

Limitations

Bias related to social desirability; since the study is self reporting because no clinical inspection were done regarding the ethics, there is more likelihood of the participants to give culturally acceptable answer.

Lack of standardized questionnaire related to this specific topic.

8 Conclusion

The findings of the current study have indicated that intention of women to continue FGM practice can be influenced by some socio demographic characteristics educational status and having television at household to access information related to FGM.

This study shows prevalence of FGM is still high in Kebri Beyah district because most of study participants have negative intention to stop FGM practice for the future and planned to circumcise their daughters in the future to maintain their tradition.

In this study most of the respondents justified for the continuation of this practice as religion demand and custom. In addition to this some of them circumcise their daughter to avoid social pressure and stigma.

This study shows that majority of respondents have good knowledge about negative health effects of FGM and negative attitude towards FGM practice, here alarming paradox is the majority of respondents have intention to continue FGM practice despite good knowledge and negative attitude they favor to FGM, which seems hide-bound attitude.

We conclude the findings of this study health professionals were the major sources of information used to increase knowledge related to FGM likewise previous studies, while health institutions and religion organization were most preferred settings to achieve the desired behavioral change to stop female circumcision and Drama and songs were considered to be the best means of communications to bring positive behavior towards FGM, on the on the hand, IEC activities on FGM were criticized for not addressing rural area.

Lack of community member participation in community based anti-FGM interventional programs, lack of community leader commitment and stigmazation as well as social pressure to uncircumcised women were consider to be major challenges to bring the desired intention to stop FGM practice in this community indicating the need for inter collaborative efforts to promote the change to the end FGM in this population.

9 Recommendation

1. Anti- FGM interventions should be directed towards the alleviation of stigma at the community level and encouraged by using uncircumcised girls as ambassadors to the community providing technical, materials and financial at community level.
2. Religious leaders and community leaders should play major role in the process of changing the behavior of the entire community by arranging training, workshops, media campaign and outreach to bring positive intention to stop female circumcision.
3. The local administration should have to make continued effort to bring positive behavioral change against FGC practice to this population by empowering the existing negative attitude and discouraging positive attitude towards FGM practice
4. The local organizations should encourage the local women association to break the negative intention towards FGM practice
5. Employment creation for circumcisers and enforcing the law against the practice need to being initiated by local organization.
6. Further research is recommended to explore the religious aspects to bring positive behavioral change towards FGM practice.

Reference

1. WHO: Female Genital Mutilation An overview. Geneva, Switzerland; 1998. Pp 1-5.
2. UNFPA: Global Consultation on Female Genital Mutilation/Cutting, Technical Report; 2009.
3. WHO: Female genital mutilation. Programmes to date: what works and what doesn't? A review. Geneva; 2009.
4. United Nations Children's Fund: Female genital mutilation/female genital cutting: a statistical report; 2005.pp. 1-58
5. WHO: Eliminating female genital mutilation: an interagency statement. UNAIDS, UNDP, UNECA, UNESCO, UNFPA, UNHCHR, UNHCR, UNICEF, UNIFEM, WHO. Geneva, World; 2008.pp.1-3
6. Center for Reproductive Rights: Female genital mutilation: A Matter of human rights: An advocate's guide to action. 2nd Ed. New York: Center for reproductive rights; 2006.
7. Banda F: National legislation against female genital mutilation. Esh born, Germany: German Technical Cooperation; 2003.
8. PATH I: Female genital mutilation in Africa. An analysis of current abandonment approaches. Nairobi: Kenya; 2005.
9. WHO: Female Genital Mutilation: a joint WHO/UNICEF/UNFPA statement. Geneva, Switzerland: WHO; 1997.
10. UNICEF: Female genital mutilation/cutting among Iraqi Kurdistan; 2013. pp3-26
11. Central Statistical Agency, ORC Macro: Ethiopia Demographic Health Survey, 2005. Addis Ababa, Ethiopia, Calverton, Maryland: central statistical agency and ORC Macro; 2006.
12. Kitaw Y, Hailemeskel F, Dejene A: Old beyond Imaginings: Ethiopia Harmful Traditional Practices.2nd edition. Addis Ababa: EGLDAM; 2008.
13. Getnet M, Wakgari D: Prevalence and associated factors of female genital mutilation among Somali refugees in Eastern Ethiopia: a cross-sectional study. *BMC Public Health* 2009, **9**:264.
14. Population media: Centre spring Eradicating Female genital mutilation in Ethiopia; 2000.
15. Rahman A, Toubia NF: Female genital mutilation; a guide to laws and policies worldwide. Zed books. London, New York; 2000.

16. Shell-Duncan B, Ylva H: “Female genital cutting: the beginning of the end,” in Female “Circumcision” in Africa. Culture, Controversy, and Change. B. Shell-Duncan and Y. Hernlund, Eds, Lynne Rienner Publishing, Colo, USA, 2000.
17. World Health Organization: Female Genital Mutilation Programmes to Date; what works and what doesn’t. 1999.
18. Muktar A, e’tal: Knowledge, Attitude and Practice of FGM among women in jigjiga town, Eastern Ethiopia; a cross-sectional study. Gaziantep med j 2013; 19(3):164-168.
19. Wondimu S, Nega A: Female genital mutilation: prevalence, perceptions and effect on women’s health in Kersa district of Ethiopia; International Journal of Women’s Health 2012:4 45–54.
20. Piotrow, Kincaid, et al: Lessons learned from family planning and reproductive health. Praeger publishing; 1997.
21. Berg RC, Denison E: Interventions to reduce the prevalence of female genital mutilation/cutting in African countries. Campbell Systematic Reviews 2012:9.
22. Abate A, Kifle M: Prevalence of female genital mutilation and attitude of mothers towards it in serbo town. A cross- sectional study. Ethiop J Health Sci 2002:12(2):59-68.
23. Rushwan H: The Health Consequences of Female Genital Mutilation from a Health Provider’s Perspective. 47th World Health Assembly. Geneva, Swizerland.1994.
24. Hosken F. The Hosken Report: Genital and Sexual Mutilation of Females; Third Revised Edition: Women’s International Network News Publishing, 1982; 439.
25. Population Reference Bureau: Female Genital Mutilation/Cutting: Data and Trends, Update 2010. Washington, D.C, USA: Population reference Bureau; 2010.
26. World Bank: Female Genital Mutilation/cutting in Somalia. Hargaisa, Somalia: World Bank; 2004.
27. Getachew I: Fighting Female Genital Mutilation/cutting in Ethiopia’s Somali region. Addis Ababa: UNICEF; 2006.
28. United States Department of State Ethiopia: Report of female genital mutilation (FGM) or female genital cutting (FGC), Addis Ababa, Ethiopia; 2001.
29. Tewodros G: Female genital mutilation and birth complications, Jijiga town, Eastern Ethiopia. Ethiopian Journal of Health Development.2002; 14 (3):69-276.

30. Zenebe F: Factors Associated with Perceived Continuation of Females' Genital Mutilation among Women in Ethiopia, Survey of secondary data obtained from EDHS2005, 2005.
31. WHO. An update on WHO work on female genital mutilation. Progress report 2011.
32. Female genital mutilation fact sheets, Forward 2005.
33. Jasmine A, Christine M, Michel B, Oliver I: Care of women with female genital mutilation/cutting 2011; 415:123-135.
34. Ministry of Health New Zealand: Female genital mutilation teaching module.FGM education program for the New Zealand Ministry of Health. Nov, 2009.
35. Banks E, Meirik O, et al: Female genital mutilation and obstetric outcome: WHO collaborative prospective study in six African countries. Lancet.2006; 367:1835–1841.
36. The consequences of female genital mutilation, from African women organization; 2006.
37. IRIN. The controversy of female genital mutilation. Nairobi: IRIN; 2006; 154:245-252.
38. Behrendt A, Moritz S: Posttraumatic stress disorder and memory problems after female genital mutilation. Am J Psychiatry. 2005; 162: 1000–1002.
39. Gadallah MA, Al-Tayeb MN and et.al: Prevalence of female genital cutting among Egyptian girls. Bull World Health Organ.2008; 86: 269–274.
40. Lewnes, A: Changing a Harmful Social Convention: Female Genital Mutilation/Cutting. Florence: UNICEF; 2005.
41. Toubia NF, Sharief EH: Female genital mutilation: have we made progress? Int J Gynecol Obstet.2003; 6:251–261. doi: 10.1016/S0020-7292(03)00229-7.
42. Leye E, Soetkin B and et.al: Behavior change towards female genital mutilation: lessons learned from Africa and Europe. 2005.
43. Izett S, Toubia NF: Learning about Social Change. A research evaluation guidebook using Female Genital Mutilation as a Case Study; Rainbo: New York. USA; 1999.
44. Family Health International: Behavior Change Communication (BCC) for HIV/AIDS: a strategic framework. Arlington, USA; 2002.
45. Parker, W: Rethinking conceptual approaches to behavior change: the importance of context. In: Communicating AIDS needs project/CAN; 2004.
46. Dorkenoo E, Morison L, Macfarlane A: A statistical study to estimate the prevalence of female genital mutilation in England and Wales. Summary report. London; 2007.

47. GTZ: Addressing female genital mutilation; Challenges and perspectives for health programmes. Part I: select approaches; 2001.
48. Central Statistical Agency [Ethiopia]: Summary and Statistical Report of the 2007 Population and Housing Census. Addis Ababa, Ethiopia: Population and Houses Census Commission; 2008:57–60.
49. Banks E, Meirik O, Farley T, Akande O, Bathija H, Ali M: Female genital mutilation and obstetric outcome: WHO collaborative prospective study in six African countries. *Lancet* 2006, 367:1835-1841.
50. Missailidis K, Gebre-Medhin M: Female genital mutilation in eastern Ethiopia. *Lancet* 2000, 356:137-138.
51. Almroth L, Almroth-Berggren V, Hassanein OM, Al-Said SS, Hasan SS, Lithell UB: Male complications of female genital mutilation. *Soc Sci Med* 2001, 53:1455-1460.
52. Herieka E, Dhar J: Female genital mutilation in the Sudan: survey of the attitude of the Khartoum University students towards this practice. *Sexually Transmitted Infect* 2003, 79:220-230.
53. Turillazzi E, Fineschi V: Female genital mutilation: the ethical impact of the new Italian law. *J Med Ethics*. 2007; 33:98–101.
54. Gele AA, Bø BP, Sundby J: Have we made progress in Somalia after 30 years of interventions? Attitudes toward female circumcision among people in the Hargeisa district.*BMC Res Notes*. 2013; 6:122.
55. Bayoudh F, Barrak S, Ben Fredj N, Allani R, Hamdi M: Study of a custom in Somalia: the circumcision of girls. Med Trop (Mars) 1995; 55(3):238-42.
56. Spadacini B, Nichols P: Campaigning against female genital mutilation in Ethiopia using popular education. Gend Dev1998; 6(2):44-52.
57. Nurilign A, Getechew M, et'al: Knowledge, Attitude and Practice of Women Towards Female Genital Mutilation in Lejet Kebele, Dembecha Woreda, Amhara Regional State. Journal of Gynecology and Obstetrics 2015; 3(2): 21-25.
58. Babalola S, Brasington A, Agbasimalo A, Helland A, Nwanguma E, Onah N. Impact of a communication programme on female genital cutting in eastern Nigeria. Trop Med Int Health 2006; 11(10):1594–603.

59. Satti A, Elmusharaf S, Bedri H, Idris T, Hashim MSK, Suliman GI, Almroth L: Prevalence and determinants of the practice of genitalmutilation of girls in Khartum, Sudan. *Ann Trop Paediatr* 2006, 26:303-310.
60. Johnsdotter S: Swedish legislation regarding "female genital mutilation" and implementation of the law, evaluating the impact of existing legislation in Europe with regard to female genital mutilation. Ghent University International Center for Reproductive Health; Dec, 2003.
61. Msuya SE, Mbizvo E, Hussain A, Sundby J, Sam NE, Stray-Pedersen B: Female genital cutting in Kilimmanjaro, Tanzania: changing attitudes? *Trop Med Int Health* 2002, 7:159-165.
62. Gage AJ, Rossem RV: Attitudes towards the discontinuation of female genital cutting among men and women in Guinea. *Int J Gynecol Obstet* 2006, 92:92-96.
63. Johnsdotter S. Swedish legislation regarding "female genital mutilation" and implementation of the law, evaluating the impact of existing legislation in Europe with regard to female genital mutilation. Ghent University International Center for Reproductive Health; Dec, 2003.
64. Sara J. The FGM legislation implemented: experiences from Sweden, Malmö University. Jan, 2009.
65. United Nations. Good practices in legislation on "harmful practices" against women. New York: UN; 2009.
66. Deutsche Gesellschaft für Technische Zusammenarbeit GmbH. Good practice: harmonising traditional norms and national law in Ethiopia. Eschborn: GTZ; 2008.
67. Karmaker B, Kandala NB, Chung D, Clarke A. Factors associated with female genital mutilation in Burkina Faso and its policy implications. Int J Equity Health. 2011;10:20
68. Herieka E, Dhar J: Female genital mutilation in the Sudan: survey of the attitude of the Khartoum University students towards this practice. *Sexually Transmitted Infect* 2003, 79:220-230.

ANNEXXES

Questionnaire

Informed Consent

Read the following paragraph for the selected person.

My name is ----------. I am working as data collector in a survey conducted by Addis Ababa University. To conduct our study, I would like to ask you some questions which may take about 30 minutes. As your participation is very important to the outcome of the study, we kindly request you to give us your sincere and truthful answer. All the information that you and other respondents are going to provide us will remain confidential and you don't need to mention your name and you are also free to withdraw at any time and if you have question during interview you can ask and discuss with the interviewer.

Are you willing to participate in the interview? Yes, _____ (continue the interview if the respondent says, "Yes") No, _____ (Thank and stop here if respondent says "No")
Signature_____ Date_____

(Signature of the interviewer certifying that consent has been obtained verbally)

Instruction: - The following are interview questions in order to identify barriers to behavioral change to stop FGM practice. Please give your honest and truthful answer to each question from the indicated choices.

Contact Address:-

Mobile: - 09-15-11-15-91
Email: - Naasir788@gmail.com

I. SOCIO-ECONOMIC AND DEMOGRAPIC CHARACTER

No	Questions	Alternative responses	Skip
101	Age	_____years	
102	Religion	1.Muslim 2.Orthodox 3.Protestant 4.Others(specify)_____	
103	Ethnicity	1.Somali 2.Oromo 3.Amhara 4.Tigre 4.Others(specify)_____	
104	Marital status	1.Single 2.Married 3.Divorced 4.Windowed	
105	Educational status	1.Can not read and write 2.Can read and write 3.Grade 1-6 4.Grade 7-12 5.Diploma and above 6.Others(specify)_____	
106	Occupational status	1.Farmer 2.House wife 3.Civil servant 4.Daily laborer 5.Merchant 6.Student 7.Others(specify)	
107	Family income per months	_____ETB	
108	Is there radio in your household	1.Yes 2.No	
109	Is there television in your household	1.Yes 2.No	

II. COMMUNICATION RELATED TO FGM PREVENTION

No	Questions	Alternative responses	Skip
201	Have you ever heard about FGM on radio	1.Yes 2. No	If no Q203
202	If **''yes''** how often have you listened to radio during the last four weeks	1.At least once a week 2.At least once in two weeks 3. At least once in two weeks in three weeks 4. At least once in three weeks in four weeks 5.Other(specify)_____	
203	Have you ever watched about FGM on television	1.Yes 2.No	If no Q205
204	If **''yes''** how often have you watched to the television during the last four weeks	1.At least once a week 2.At least once in two weeks 3. At least once in two weeks in three weeks 4. At least once in three weeks in four weeks 5.Other(specify)_____	
205	During the last four weeks have you read any printed material like newspaper, magazine, posters and etc.	1.Yes 2.No	

III. Knowledge toward FGM

No	Questions	Alternative responses	Skip
301	Have you learned anything about FGM for the last 12 months	1.Yes 2.No	If no Q303
302	If **''yes''** what did you learned	1.Types of FGM 2.Prevention methods of FGM 3.Impacts of FGM 4.Others specify_____	
303	Which sources of information helped you to increase your knowledge related to FGM	1.Family 2.Peers 3.Religious leader 4.Health professionals 5.Radio 6.Television 7.Teachers 8.Anti-FGM clubs 9.Others (specify)_____	
304	Do you know about any types of FGM	1.Yes 2.No	
305	FGM cause complication	1.Yes 2.No	
306	FGM expose women for HIV	1.Yes 2. No	
307	FGM cause difficult during delivery	1.Yes 2.No	
308	FGM negatively affect future sexual relation	1.Yes 2.No	
309	FGM cause bleeding	1.Yes 2. No	
310	What are the reasons to perform FGM in your locality	_____	
311	Who decides to perform FGM	1.Father 2.Mother 3.Both mother and father 4.Others(specify)_____	
312	Do you think FGM is harmful and should be stopped	1.Yes 2.No	
313	What are the possible means to prevent FGM practice	_____	

IV. Practice and attitude of FGM

S.no	Questions	Alternative responses	Skip
401	Do FGM practiced in your community	1.Yes 2.No	
402	Had you yourself undergone FGM	1.Yes 2. No	
403	At what age you are exposed to FGM	_____	
404	Which type of FGM have you exposed	_____	
405	Who perform FGM	1.Traditional birth attendant 2.Village women 3.Healh professional 4.Others(specify)____	
406	What types of instruments used to perform FGM	1.Knife 2.Ravor 3.Scissor 4.Others(specify)___	
407	FGM increase chance of marriage	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree	
408	FGM is religious requirement	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree	
409	FGM prevent premarital sex	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree	
410	Uncircumcised women are out of social norms	1.Strongly agree 2.Agree 3.Neutral 4.Disagree 5.Strongly disagree	
411	Women should actively participate anti FGM activities	1.Strongly agree 2.Agree 3. Neutral 3.Disagree 4.Strongly disagree	

V. Intention towards FGM

501	Did the information you received about FGM changed your previous attitudes	1.Yes 2.No	
502	To bring positive behavioral change which setting(s) do you prefer to obtain information related to FGM	1.Health institutions 2.Schools 3.Religious organization 3.Community based organization 4.At home level 5. Peer 6.Others(specify)_____	
503	How should information related FGM be communicated in order to bring significant behavioral change	1.Song 2.Drama 3.News 4.Speech 5.Discussions 6.Others(specify)	
504	Have you experienced any sever side effect of FGM	1.Yes 2.No	If **No** skip Q506
505	If ‘**’yes’’** how do you rate the positive behavioral change you have noticed due to severity of FGM	1.Great change 2.Low change 3.No change 4.I don’t know	
506	circumcised women are physically clean and hygiene than uncircumcised	1.Yes 2.No	
507	Do you have plan to circumcise your daughter in the future	1.Yes 2. No	
508	What are the challenges to the behavioral change to stop FGM	1.Low involvement of community 2.Low IEC effort 3.Low involvement of religious organization 4.Gender role 5.Stigmazation and social pressure 6.low involvement of community leaders 7.lack of legal action 8. Others(specify)_____	

FOCUS GROUP DISCUSSION GUIDELINE

Good morning/ afternoon, we thank you all for coming on time. My name is _____. My colleague near to me is called _____. We came from Addis Ababa University. Read the following as it is:

"After a brief introduction, we will be talking about different issues related to FGM. We will be asking you questions about your overall experience regarding FGM in your locality and issues pertaining to barriers to behavioral change towards the prevention of FGM. We will conclude the session by asking for your recommendations on ways to bring about positive behavioral change towards the prevention and ending of FGM. Would you be willing to participate in the discussion?

If yes, proceed.

If no, thank and stop here._____

(Signature of the moderator certifying that consent has been obtained verbally)

Date _____Time_____

TOPIC GUIDELINE FOR FOCUS GROUP DISCUSSION

1. What do you perceive about FGM? (Types and reasons of practice)?
2. Discuss the possible health impacts of FGM practice?
3. What are the important sources of information for positive behavioral change towards FGM prevention?
4. What is your intention toward FGM practice? (probing)
5. Do you suggest another means of bringing about positive behavioral change in order to curtail the fast spread of FGM among our community?

This is the end of our discussion. Thank you very much for your participation in the discussion.

Ogalanshaha ka qaybgalayasha

Magacaygu waa_____ waxaan uruurinayaa xog ku saabsan GUDNIINKA FIRCOONIGA taasoo oo uu cilmi baadhis ku samaynayo Arday kaqalinjabinayawaxbarashada mastar-ta ee jaamacada ADDDIS ABABA qaybta caafimaadka. Waxaan si naxariis leh idiinka codsanayaa inaad feejignaan i siisaan si aan idiinku sharaxo xog uruurintan laydiin soo xushay.

Cinwaanka cilmi baadhista

Caqabadaha hortaagan in labadalo dhaqamada gudniinka fircooniga ee qabri bayax ee deegaanka soomaalida itoobiya. Sirtinu way qarsoonaan doontaa, natiijadu bulshada waxay u gaadhi doonta iyadoon muujinaynin cid ama qoys, wax magac ah laguma qori doona waraaqaha xog uruurinta, wax raadraac keena oo xidhiidhiya ka qayb qaataha iyo cilmi baadhaha majirayo qoraal iyo hadalba. Ka qayb qaatuhu waa mutadawac(iskii), xaq waxaad uleedahay inaad cadaysato ka qayb qaadashada iyo diidmada, waad joojin kartaa xiligaad doonto, su,aashaadan doonaynin kama jawaabaysid.

waan akhristay ama la ii akhriyay, waan fahmay ula jeedada, qaabka, khasaaraha iyo faa,iidada, xaalada kalsoonaanshaha, xuquuqda iyo cinwaanka hadii su,aal loo baahdo. Hadaba waxaan cadaynayaa inaan iskay u ogalaaday ka qayb qaadashada xog-waraysigan anigoo ku qeexaya saxiixayga hoose

saxiixa; xog-bixiyaha_____
saxiixa xog-uruuriyaha_____

Wixi faahfahina nagala soo xidhiidh:-

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I. Xoogta kaqaybgalayasha

Tiro	Su,aalaha	Jawaabaha	Ugu-dub
101	Dada	_____sano	
102	Diinta	1.muslim 2.ortodhokis 3.beendee 4.wax kale(caddee)_____	
103	Isirka	1. Somali 2. Oromo 3. Amxaaro 4. Tigree 5. Wax Kale(caddee)____	
104	Xaaladaguur	1. ma guursanin 2. Guursadey 3. lafuray 4. Lagadhintay	
105	Heerkaa aqoonta	1. Ma Qori/ akhriyikaro 2. Qori/ akhriyikaraa 3. Fasalka 1- 6aad 4. Fasalka 7- 12aad 5. Diploma iyokasareeya 6. Wax kale (caddee)_____	
106	Shaqada	1. Beeralay 2. Guri joog 3. Shaqaaledawladeed 4. Xoogsade 5. Ganacsade 6. Arday 7. Wax kale (caddee)_____	
107	Rikodh ma leedihiin	1. Haa 2. Maya	
108	Telefishin ma leedihiin	1. Haa 2. Maya	

II. Adeegsiga isgadhsinta la xidhiidha gudniinka fircooniga

Tiro	Suaaalaha	Jawaabaha	Ugu-dub
201	Waligaa raadiyaha ma kamaqashay gudniinka fircooniga	1. Haa 2. Maya	Haday **Maya** tahay ugudub suaasha 3aad
202	Haday **Haa** tahay bishii u danbaysay imisa jeer ayaad ka maqashay	1. Hal mar usbuucii 2. Hal mar labadii usbuuc 3. Hal mar labadii ilaa saddexdii usbuuc 4. Hal mar saddexdii ilaa afartii usbuuc 5. Wax kale (caddee)_____	
203	TV-ga waligaa ma kadaawatay gudniinka fircooniga	1. Ha a 2. Maya	Haday **Maya** tahay u gudub suaasha 5aad
204	Haday **Haa** tahay bishii u danbaysay imisa jeer ayaad kadaawatay	1. Hal mar usbuucii 2. Hal mar labadii usbuuc 3. Hal mar labadii ilaa saddexdii usbuuc 4. Hal mar saddexdi ilaa afartii usbuuc 5. Wax kale (caddee)_____	
205	Afartii usbuuc ee ugu danbaysay ma akhriday wax yaalaha la daabacay sida joornaalka ,jaraidyada iyo tabeelayowga IWM	1. Haa 2. Maya	

III. Aqoonta laxidhiidh gudninka firconiga

Tiro	Su,aalaha	Jawaabaha	Ugudub
302	wax ma kabaratay gudniinka fircooniga ah 12 billod ee ugu dambeyay	1. Haa 2. Maya	Haday **Maya** tahay ugudub su,aasha 4aad
303	Haday **Haa** tahay maxaad kabaratay	1. Qaybaha Gudniin Firconiga 2. Qaabka looga hortago Gudniin Firconiga 3. Wax yeelada Gudniin Firconiga 4. Wax kale (caddee) _____	
304	Xagee laga hela xogaha aqooneed ee la xidhiidha gudniinka fircooniga	1. Qoyska 2. Saaxiibka 3. Hogaamiye yaasha diinta 4. Xirfadlayasha caafimaadka 5. Raadiya 6. Telefishinka 7. Macaliminta 8. Kooxaha kahortaga Gudniin Firconiga 9. Wax kale (caddee)_____	
305	Ma kala taqaanaa qaybaha gudniinka fircoooniga	1. Haa 2. Maya	
306	Gudniinka fircoonigu wuxu sababi kara xanuunka HIV/AIDS	1. Haa 2. Maya	
307	Gudniina fircoonigu wuxu waxyeelo ku keena xiidhiidhka galmada dumarka ee mustaqbalka	6. Haa 7. Mayaa	
308	Gudniinka firconigu wuxu sababa mashkilado xaga dhalmada	1. Haa 2. Mayaa	
309	Gudniinka fircooniga wuxu sababa dhiig bax	1. Haa 2. Mayaa	
310	Waa maxay sababaha kalifaya GF	1. Dhaqanka 2. Diinta 3. In la hubiyo bikrada	

		gabadha 4. Wax kale(caddee)	
311	Yaa go.aamiya in gabadha lagu sameyo gudnin fircooniya	1.Abaha 2. Hooyada 3. labada waalidba 4. Waxkale(caddie	
312	Ma u malaynaysaa inuu waxyeelo leeyahay gudniinka fircooniga oo ay tahay in la joojiyo	1. Haa 2. Maya	Haday **Maya** tahay kagudub su,aasha 9
313	Waa maxay qaababka ugu haboon ee lagaga hortagi karo gudniinka fircooniga	_____	

IV. Dhaqanka iyo habdhaqanka gudniinka fircooniga

Tiro	**Su,aalaha**	**Jawaabaha**	**Ugudub**
401	Gudniinka fircooniga ma lagaga dhaqma bulshadina	1.Haa 2.Mayaa	
402	Adiga gudniin fircooni ma lagugu sameyay	1.Haa 2. Mayaa	
403	Imisa jir ayad ahayd markii lagugu sameyay gudniinka fircooniga	_____sanno	
404	Gudniin nooceya ayaa lagugu sameyay	_____	
405	Ayaa sameya gudniinka fircooniga	1.Umuliso dhaqamedka 1. Hawenka tulada kunool 3.Xirfad layasha cafimaadka 4.Waxkale(cadde)	
406	Qalabke lagu sameya gudniinka fircooniga	1.Mindi 2.Sakiin 3.Manqas 4.Waxkale(caddee)	
407	Fursada guurka ayuu kordhiya gudniinka fircoonigu	1.Aad ayan u amiinsaahay 2.Amiinsan 3.Dhexdhexad 4. Kaso hor jeeda 5.Aad uga so horjeda	
408	Diiniyan waa lo bahanyahay gudniinka fircooniga	1.Aad ayan u amiinsaahay 2.Amiinsan 3.Dhexdhexad 4.Kaso hor jeeda 5.Aad uga so horjeda	

409	Gudniinka fircoonigu wuxu ka hortaga galmada guurka kahore	1.Aad ayan u amiinsaahay 2.Amiinsan 3. Dhexdhexad 4.Kaso hor jeeda 5.Aad uga so horjeda	
410	Gabadha aan la gudin waa gabadh kadhex baxsan caddooyika bulshada	1.Aad ayan u amiinsaahay 2.Amiinsan 3. Dhexdhexd 4.Kaso hor jeeda 5.Aad uga so horjeda	
411	Dumarku waa inay si firfircon uga qayb qatan barmaamijka ka hortaga gudniinka fircooniga	1.Aad ayan u amiinsaahay 2.Amiinsan 3.Dhexdhexad 4. Kaso hor jeeda 5.Aad uga so horjeda	

V. Damaca in la joojiyo gudninka fircooniga

Tiro	**Su,aalaha**	**Jawaabaha**	**Ugudub**
501	Xogaha aad heshay wax ma kabadaleen aaminaadaadii hore ee gudniinka fircooniga	1. Haa 2. Maya	
502	In la helo isbadal dhanka dabecadaha laxidhiidha dhaqanka gudniinka fircooniga nidaamyadan keebaad door bidaysaa	1. Goobaha caafimaad 2. Iskuulada 3. Ururada diimaha 4. Ururrada bulshada 5. Heer guri 6. Waxkale (caddee)_____	
503	Qaabkee ugu haboon oo loo gudbin karaa xogaha dhaqan-badalka fiican ee gudniinka fircooniga	1. Hees 2. Riwaayad 3. Wararka 4. Khudbad 5. Dood cilmiyeed 6. Wax kale (caddee)	
504	Ma garanaysaa wax waxyeelo ah oo uu leeyahay Gudniiinka Fircoonigu	1. Haa 2. Maya	Haday **Maya** tahay u gudub sua,aasha 6aad
505	Haday **Haa** tahay sided u darajaynaysaa is badalka dhaqanka wanaagsan ee Gudniiinka Fircoonigu adoo u eegaya waxyeelooyinka daran ee aadsheegtay	1. Isbadalwayn 2. Isbadalyar 3. Mid dhexdhexaad ah 4. Isbadal ma leh 5. Magaranayo	

506	Ma u malaynaysaa haweenayda la guday inay ka nadiifsantahay tan lagudiin	1. Haa 2. Maya	
507	Ma qorshaynaysa inad gudiid gabdhahaga mustaqbalka	1. Haa 2. Mayaa	
508	Maxay yihiin caqabadaha hortaagan in labadalo Gudniinka fircooniga	1. Ka qayb qaadashada bulshada oo hooseeeysa 2. IEC-ga dadaalkooda oo hooseeya 3. doorka jinsiyada 4. Takoorka iyo cadaadiska bulshada 5. Ururada diimaha kaqayb qaadashadooda oo hooseeya 6. Hogaamiyayaasha bulshada kaqayb qaadashadooda oo hooseeya 7. Talaaboyin sharciya oon jirin 8. Wax kale (Cadee)_____	

HAGAHA DOOD WADAREEDDA

Subax/Galab wanaagsan

Waxaan idiinka mahadceliinayaa sidaaad wakhtigii loogu tagalay oogu timaadeen

Magacaygu waa_____ saaxiib kayga igarab fadhiyaana waxalayiraahd _____

waxaan kasoconaa jamacada ADDIS ABABA.

Qormadan siday tahay u akhri

Is barasho kadib, waxaan kahadli doonaa arimo kaladuwan oo la xidhiidha gudniinka fircooniga ah waxaan idin waydiin doonaa suaalo laxidhiidha aqoontiinna ku aadan gudniinka fircooniga ah ee deegaankiinna iyo caqabadaha hortaagan in la Badalo dhaqamada ku aadan kahortaga iyo gabagabaynta gudniinka fircooniga ah

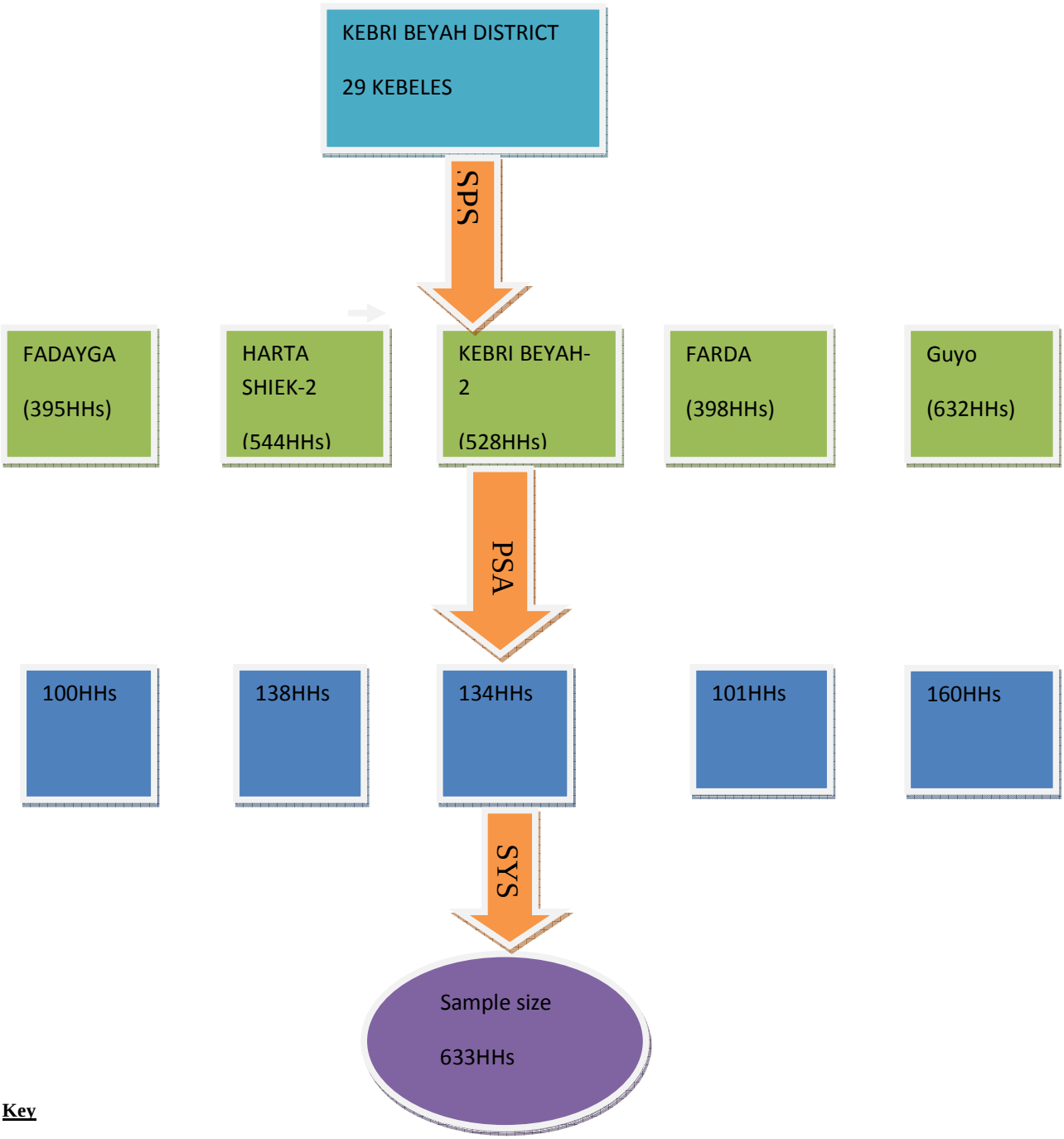
Diyaar ma u tahay inaad kaqayb qaadatid xog waraysigan

Haa _____kusoco Maya _____ mahadsanidin jooji _____ (sixiixa xidhiidhiyaha shirka wuxuu cadaynayaa ogolaanshaha hadalka oo cod ah) Taariikh _____wakhtiga _____

HAGAHA MOWDUUCA AQOON ISWAYDAARSIGA

1. Sideed u aragtaa gudniinka fircooniga ah? (Qaybaha, Sababta loogu dhaqmo iyo samaynta u cafimaadka uleyahay gudniinka firconiga)?
2. Wax kaxus samaynta u cafimaadka kuleyahay gudniinka fircoonigu?
3. Maxay yihiin meelaha ugu muhiimsan ee laga heli karo xogta dhaqan badalka wanaagsan ee ka hortaga GF?
4. Maxad rajaynaysa mustaqbal inad gabdhahaga ku samayso (qorshaha mustaqbalka ee gudniinka fircooniga)?
5. Ma u malaynaysaa inuu jiro qaab kale oo lagu keeni karo dhaqan-badalka wanaagsan si loo dhimo xawaaraha korodhka GF ee bulshadeena? ***GABAGABDII SHIRKEENA AYAAN GAADHMAY WAAD KU MAHADSAN TIHIIN KA QAYB QAADASHADIIN***

Figure 2: Schematic presentation of sampling procedure



Key

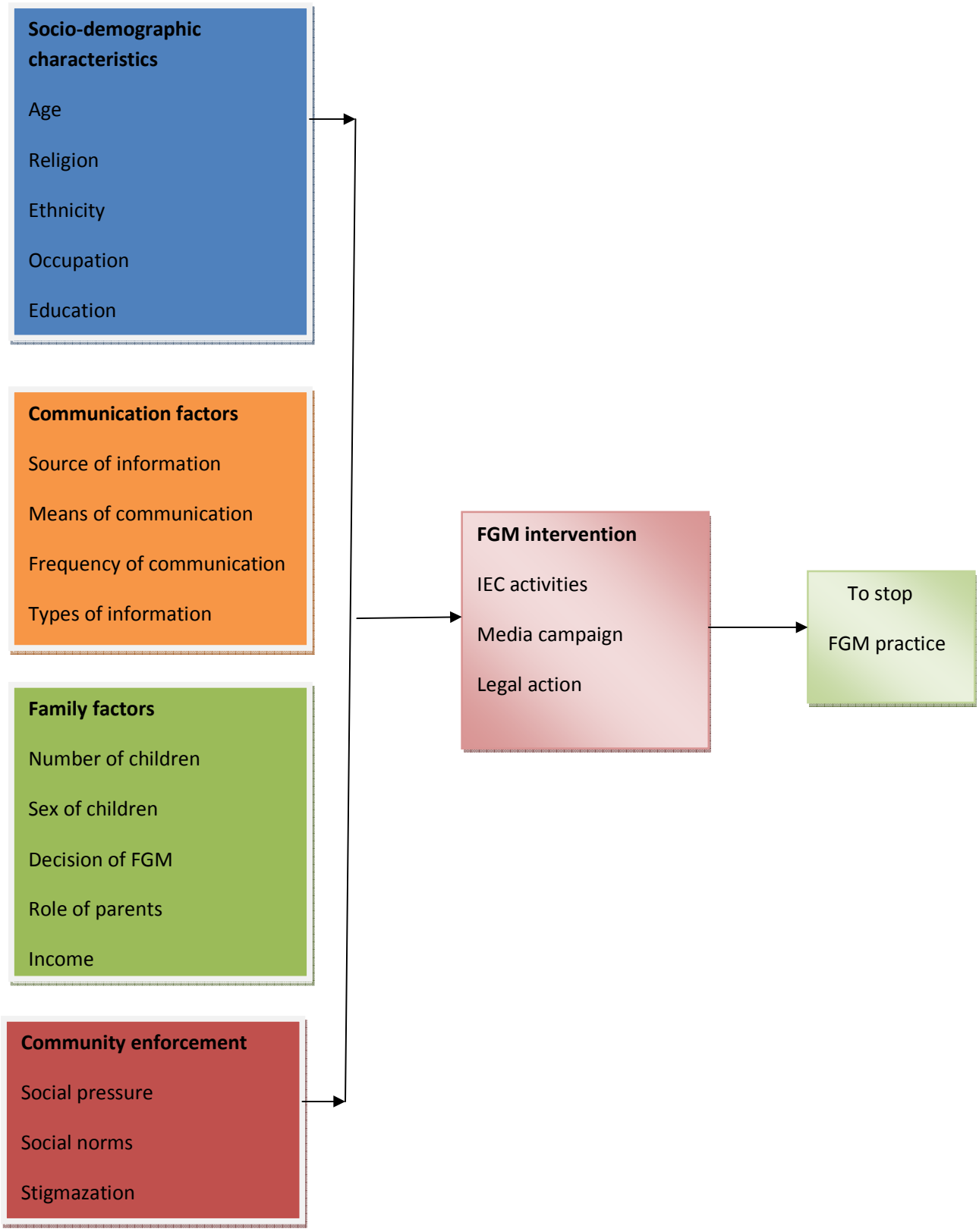
SRS= Simple random sampling

PSA= Proportional size allocation

SYS= Systematic sampling

HHs= Households

Figure 3: Schematic presentation of conceptual framework



ASSURANCE OF PRINCIPAL INVESTIGATOR

The undersigned agrees to accept the responsibility for scientific ethical and technical conduct of the research project and for provision of required progress reports as per terms and conditions of the Research Publication Office in effect at the time of grad is forwarded as the result of this application.

Name of student: Mohamed Mohamud Abib

Date: _____ Signature_____

Approval of the primary advisor

Name of the primary advisor: Mr. Mulugeta Tamire

Date: _____ Signature_____