Knowledge, Attitude, and Practice among Mothers Towards Female Circumcision
Elbugaa area- Ombada locality 2010

By

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B.Sc (honor) in PEH (U of K) 2006

A thesis submitted in partial fulfillment for the requirements of the degree of

MPEH in Health Education

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2010
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Abstract

Background

Female circumcision (FC) comprises all procedures involving partial or total removal of the external female genitalia or other injury to the female genital organs for non-medical reasons. In Northern Sudan it is estimated that 65.4% of females had circumcision. The study aimed to report on mothers’ knowledge, attitudes and practice towards female circumcision.

Methods

This was a cross-sectional descriptive community-based study conducted in Ombada Locality, Elbugaa, 2010. Ombada Locality is composed of four administrative units Alsalam, Alamir, Elbugaa, Alreef algharbi. The sample size was determined using the following statistical formula:

\[ n = \frac{N}{1 + N(e)^2} \]

Data were collected using a questionnaire directed to the mothers, and were analyzed using Statistical Package for Social Science (SPSS), version No. (13).

Results

All mothers (n=368) knew about female circumcision and the majority (n=263) (71.5%) had a positive attitude towards it, 218 mother (59.0%) had a negative expected future attitude to circumcise their daughters. Most of mothers (n=295) (80.2%) practised female circumcision in their families. The statistics showed a strong association between practising female
circumcision and mothers’ religion, (n=57) (15.5%) of mothers were Christian and they didn’t practise it. \textit{value=0.05} \quad \chi^2=226.98

\textbf{Conclusion}

Knowledge, attitude and practice among mothers varies and make strong difference in current female circumcision situation.

Thought the majority of mothers knew and practised circumcision, however they do not intend to do it for their daughters in the future.
الملخص

خلفية

يشمل خفاض الإناث (FC) جميع العمليات التي تتضمن على الإزالة الجذرية أو الكلية للأعضاء التناسلية الخارجية أو أي جرح آخر بذلك الأعضاء التناسلية الأنثوية لأسباب غير طبية.

في السودان الشمالي هناك مايقرب 65.4% من الإناث تم خفضهن. هذه الدراسة بهدف دراسة

معرفة موافقة وممارسات الأمهات تجاه خفاض الإناث.

المواد والطرق

هذة الدراسة هي دراسة وصفية مقطعية تستند على المجتمع أجريت بمحلية امدة

2010. تتكون محلية ام بدة من أربع وحدات إدارية هي السلام الأمر،البقعة،الريف الغربي،

وتحديد حجم العينة باستخدام المعادلة الإحصائية التالية:

\[ n = \frac{N}{1+N(e)} \]

تم جمع البيانات بواسطة استبانة موجهة للأمهات، وتم تحليل البيانات باستخدام الحزمة

الإحصائية للعلوم الاجتماعية (SPSS) نسخة رقم13. تم اختبار العلاقة بين المتغيرات باستخدام

اختبار كاي المربع وتمثل البيانات في الجداول والأشكال.

النتائج

أظهرت الدراسة أن جميع الأمهات (n=368) يعرفن خفاض الإناث، معظم الأمهات (n=263) موقفهن إيجابي تجاه خفاض الإناث، وأكثر من نصف الأمهات (n=218) موقفهن سلبي تجاه خفاض بناتهن في المستقبل.
معظم الأمهات (80.2 %) مارس خفاض الإناث لبناتهن. اظهرت الدراسة علاقة قوية بين ممارسة خفاض الإناث وديانة الأمهات. P value=0.05  X²=226.98

الخاتمة

المعرفة والمؤثرات السلوكية والمواقف بين الأمهات تتنوع وتتشكل اختلافاً كبيراً في الوضع الراهن لخفاض الإناث. بالرغم من أن اغلب الأمهات عرفن ومارسن الخفاض، إلا أنهن لا ينوين إجراءه لبناتهن في المستقبل.
Chapter One

1.1 Introduction:

Knowledge is defined by the Oxford English dictionary as expertise and skills acquired by a person through experience or education, the theoretical or practical understanding of a subject, what is known in a particular field or in total facts and information, or awareness or familiarity gained by experience of a fact or situation. The term knowledge is also used to mean the confident understanding of a subject with the ability to use it for specific purpose if appropriate. An attitude is a hypothetical construct that represents an individual’s degree of like or dislike for item. Attitudes are generally positive or negative views of a person, place, thing or event. The practice is to do or perform something habitually or repeatedly, in order to acquire or polish skill. It also the condition of being skilled through repeated exercise. (Stallman, 2002)

Health education is “any combination of learning experiences designed to facilitate voluntary adaptations of behavior conducive to health” (Green et al, 1980).
Female circumcision (FC) - or female genital mutilation (FGM) - is a partial or total removal of external female genitalia. It represents a traditional practice that is well known to have a serious and hazardous health and social consequences on the female (Rushwan, 1994; Toubia, 1998).

Female circumcision is widely practiced in all regions of Sudan, with some variations in the prevalence and types of circumcision performed according to the indigenous local customs and traditions. (Abdel Magied, 2005). In classical Arabic FC is called “Khifad” which means reduction. In popular Arabic used in Sudan it is called “Tahur” which means purity and cleanliness. There are three main types of female circumcision practiced in Sudan: sauna, intermediate and pharaonic circumcision. However, the three types represent different degrees of mutilation of the external genitalia of the female (Abdel Magied, 2002). Female genital mutilation or Female circumcision is known and practiced in all regions of northern Sudan. (Bergreen, 2006)

The practice in Sudan was first seen as social problem in the late 1930 when it was widely discussed by the British administration and
enlighten Sudanese. The majority of educated Sudanese felt that; it was the duty of their generation to polish custom (UNICEF, 2006).

In early 1946 the legislative assembly passed a law making pharaonic type as offense punishable by five years imprisonment. (The sauna circumcision was considered to be legal), this measure however prove to be failed. Female genital circumcision (FGC), also known as female genital mutilation (FGM), the term is almost exclusively used to describe traditional or religious procedures on a minor, which requires the parents consent because of the age of the girl (Gruenbaum, 2006)

FGM is widely practiced out in the open by many communities of varied faiths in its locus of concentration in Northeastern Africa, it is practiced in different parts of the Middle East. In the Arabian peninsula, Types I and II FGM are usually performed, often referred to as Sunna circumcision. The practice occurs particularly in northern Saudi Arabia, southern Jordan, and northern Iraq (Kurdistan). In the Iraqi village of Hasira, a recent study found that 60 percent of the women and girls reported having undergone FGM. Before the study, there had been no solid proof of the prevalence of the practice. There
is also circumstantial evidence to suggest that FGM is practiced in the
Kurdish regions of Syria, Turkey and Iran. In Oman, a few
communities still practice FGM. (WHO, 2008)

Female circumcision is highly prevalent in Sudan. Findings from the
2006 Sudan Demographic and Health Survey (SDHS) indicates that , (89%) of every married women have undergone some form of genital
cutting , varying from (65%) in Darfur Region to almost (99%) in the
northern region (UNICEF, 2007).

Strong social pressure maintains high levels of circumcision, which
is believed to promote premarital chastity among women. In most
areas in Sudan uncircumcised women are generally viewed as impure
and thus unmarriageable. Given their lack of choice and the powerful
influence of tradition, most women accept circumcision as necessary,
and even naturally part of life, and adopt the rationales given for its
existence. (Yoder; Khan, 2007)
1-1-1 Geographic Distribution of Circumcision:

1-1-2 Female circumcision around the world:

Studies conducted by the inter-Africa committee on traditional practices affecting the health of women and children in 1994 proved that in 18 African countries, circumcision is still being practiced.

The studies also pointed out that; due to increasing immigration from Africa to south Asia, Australia, Europe, Canada, Scandinavian countries and America the practice has appeared in those regions. More recent study pointed that, female genital mutilation is practiced primarily in African countries -28 country of 43. Many researchers have noted that FGC prevalence varies with ethnicity or that FGC serves as an ethnic marker. (Gruenbaum, 2006).

WHO estimates that between 100 and 140 million girls and women worldwide have been subjected to one of the first three types of female genital mutilation (UNICEF, 2000). Estimates based on the most recent prevalence data indicate that 91.5 million girls and women above 9 years old in Africa are currently living with the consequences.
of female genital mutilation. There are an estimated 3 million girls in Africa at risk of undergoing female genital mutilation every year (Yoder; Khan, 2007)

1-1-3 Female Circumcision in Sudan:

Circumcision is widely practiced in central, western, eastern and northern Sudan. This leaves out only southern Sudan and some area of Nubba mountain in southern Kordofan with exceptions of some families who have migrated to the north in Sudan and adopted the practice. It is clear that in both Muslims and Christians both pharaonic and sauna circumcision are practiced and the strange thing is that Christians practice sauna circumcision at 46.2% when compared to Muslims at 14.5%. This clearly proves that the practice is a social tradition. It is noticed that the province of Darfur and eastern province practiced circumcision at low percentage i.e. the percentage of circumcision are low in related to the rest of the provinces in Sudan. (WHO, 2008)
1.2 JUSTIFICATION:

1- An estimated 100 million to 140 million girls and women worldwide had undergone female genital mutilation/cutting (FGM/C) and more than 3 million girls are at risk for cutting each year on the African continent alone. a dangerous and potentially life-threatening procedure that causes unspeakable pain and suffering. This practice violates girls’ and women’s basic human rights, denying them of their physical and mental integrity, their right to freedom from violence and discrimination, and in the most extreme case, of their life. (UNICEF, 2008)

2- Female genital mutilation/cutting (FGM/C) is a global concern. Not only is it practiced among communities in Africa and the Middle East, but also in immigrant communities throughout the world. Moreover, recent data reveal that it occurs on a much larger scale than previously thought. It continues to be one of the most persistent, pervasive and silently endured human rights violations. (UNICEF, 2008)
3-Estimated prevalence of female genital mutilation in girls and women 15 – 49 years in Sudan, northern (approximately 80% of total population in survey) is 90.0%. (Yoder; Khan, 2007).

4-The overall female circumcision prevalence in Ombada is (93%). (Abdel Magied, 2005).

5- The highest maternal and infant mortality rates are in FGM-practicing regions. The actual number of girls who die as a result of FGM is not known. However, in areas in the Sudan where health care services are not available, it is estimated that one-third of the girls undergoing FGM will die. (UNICEF, 2005)

6- Ombada was selected because its multi-ethnic population comprises people from different regions and tribes of Sudan. Ombada is suburban area of the capital city Khartoum with adversity of inhabitants who migrated from different parts of Sudan and a majority of them are of middle and low socioeconomic status. (CBS, 2003)
1.3 THE OBJECTIVES OF THE STUDY:

1.3.1 General objective:

To study knowledge, attitudes and practices among mothers towards female circumcision.

1.3.2 The Specific objectives:

1.3.2.1 To determine knowledge among mothers towards female circumcision.

1.3.2.2 To investigate attitudes among mothers towards female circumcision.

1.3.2.3 To identify practices among mothers towards female circumcision.
LITERATURE REVIEW

1.4.1 Introduction:

Female genital mutilation (FGM) is a deeply embedded cultural tradition with meaning and symbolism for many communities. The practice of FGM is built on a ‘mental map’ of beliefs, values and codes of conduct. These are psychosexual, social and religious in nature and include the maintenance of chastity/virginity, family honor and control over women’s sexuality, the belief that FGM is necessary for hygiene and aesthetic reasons (fears of ugliness and bad odor), and the belief that it is a religious requirement for spiritual cleanliness. FGM is sustained by community enforcement mechanisms such as public recognition by celebration (use of rewards and gifts, poems and songs celebrating the circumcised while deriding the uncircumcised), the refusal to marry uncircumcised women and fear of punishment by God. (Broussard, 2008)

1.4.2 History of female genital mutilation:

The practice was mentioned by Herodotus, 500 years before the birth of Christ. He stated that Egyptians, Phoenicians, Ethiopians,
practiced female circumcision. Greek papyrus in the British museum dated 163 (BC) refer to the circumcision of girls at the age when they receive their dourest in 23(BC) in Ethiopia and Egypt. He also described excision in the first century in Egypt. Excision and infibulations were pre-Christian and pre-Islamic in these areas. Infibulations is found in writings of the historian poets ‘Bamboo’, first published in 1551 or 1552, he said: (They now left the other countries sailed into the red sea, and visited several countries inhabited by black, among these people the private parts of the girls are sewn together immediately after their birth, but in a way not to hinder the urinary way.) It is believed that, through trade from Arabian countries and the red sea coast, the practice spread to Sudan and subsequently with the spread of Islam, deeper into Africa. (Gruenbaum, 2006)

1.4.3 Classification of female genital mutilation:

FGC consists of several distinct procedures. Their severity is often viewed as dependent on how much genital tissue is cut away. The WHO which uses the term Female Genital Mutilation (FGM) divides
the procedure into four major types, although there is some debate as to whether all common forms of FGM fit into these four categories, as well as issues with the reliability of reported data. (Obermeyer, 2005)

1.4.3.1 Type I:

The WHO defines Type I FGM as the partial or total removal of the clitoris (clitoridectomy) and/or the prepuce (clitoral hood). When it is important to distinguish between the variations of Type I cutting, the following subdivisions are proposed: Type I-a, removal of the clitoral hood or prepuce only (which some view as analogous to male circumcision and thus more acceptable); Type I-b, removal of the clitoris with the prepuce. In the context of women who seek out labia plasty, there is disagreement among doctors as to whether to remove the clitoral hood in some cases to enhance sexuality or whether this is too likely to lead to scarring and other problems. (Obermeyer, 2005)

1.4.3.2 Type II:

The WHO's definition of Type II FGM is "partial or total removal of the clitoris and the labia minora, with or without excision of the labia
majora. When it is important to distinguish between the major variations that have been documented, the following subdivisions are proposed: Type II-a, removal of the labia minora only; Type II-b, partial or total removal of the clitoris and the labia minora; Type II-c, partial or total removal of the clitoris, the labia minora and the labia majora.\cite{Nour et al,2006}

1.4.3.3 Type III: Infibulations with excision:

The WHO defines Type III FGM as narrowing of the vaginal orifice with creation of a covering seal by cutting and repositioning the labia minora and/or the labia majora, with or without excision of the clitoris (infibulations)." It is the most extensive form of FGM, and accounts for about 10% of all FGM procedures described from Africa. Infibulation is also known as "pharaonic circumcision”. In a study of infibulation in the Horn of Africa, Pieters observed that the procedure involves extensive tissue removal of the external genitalia, including all of the labia minora and the inside of the labia majora. The labia majora are then held together using thorns or stitching. In some cases the girl's legs have been tied together for two to six weeks, to prevent
her from moving and to allow the healing of the two sides of the vulva. Nothing remains but the walls of flesh from the pubis down to the anus, with the exception of an opening at the inferior portion of the vulva to allow urine and menstrual blood to pass through. Generally, a practitioner recognized as having the necessary skill carries out this procedure, and a local anesthetic is used. (Berggren, 2006)

However, when carried out "in the bush", infibulation is often performed by an elderly matron or midwife of the village, without sterile procedure or anesthesia. A reverse infublations can be performed to allow for sexual intercourse or when undergoing labor, or by female relatives, whose responsibility it is to inspect the wound every few weeks and open it some more if necessary. During childbirth, the enlargement is too small to allow vaginal delivery, and so the infubulations is opened completely and may be restored after delivery. Again, the legs are sometimes tied together to allow the wound to heal. When childbirth takes place in a hospital, the surgeons may preserve the infubulations by enlarging the vagina with deep
episiotomies. Afterwards, the patient may insist that her vulva be closed again. (Berggren, 2006)

Women who have been infibulated face a lot of difficulty in delivering children, especially if the infibulations is not undone beforehand, which often results in severe tearing of the infibulated area, or fetal death if the birth canal is not cleared. The risk of severe physical and psychological complications is more highly associated with women who have undergone infibulations as opposed to one of the lesser forms of FGM. Although there is little research on the psychological side effects of FGM, many women feel great pressure to conform to the norms set out by their community, and suffer from anxiety and depression as a result "There is also a higher rate of post-traumatic stress disorder in circumcised females" A five-year study of 300 women and 100 men in Sudan found that "sexual desire, pleasure, and orgasm are experienced by the majority ["nearly 90%"] of women who have been subjected to this extreme sexual mutilation, in spite of their being culturally bound to hide these experiences." (Toubia; Sharief, 2003)
1.4.3.4 Type IV: Other types:

There are other forms of FGM, collectively referred to as Type IV that may not involve tissue removal. The WHO defines Type IV FGM as "all other harmful procedures to the female genitalia for non-medical purposes, for example, pricking, piercing, incising, scraping and cauterization. This includes a diverse range of practices, such as pricking the clitoris with needles, burning or scarring the genitals as well as ripping or tearing of the vagina. Type IV is found primarily among isolated ethnic groups as well as in combination with other types. (UNICEF, 2008)

1.4.4 The operation:

The little girl, entirely nude, is immobilized in the sitting position on a low stool by at least three women. One of them with her arms tightly around the little girl’s chest two others hold the child’s thighs a part by force, in order to open wide the vulva. The child’s arms are tied behind her back, immobilized by two other women guests. The traditional operator says a short prayer, then the old women takes her razor and excises the
clitoris. The little girl howls and writhers in pain although strongly held down. The operator wipes the blood from the wound, as well as the guest ‘verify’ her work, sometimes putting their fingers in. The amount of scraping of the large lips depends upon the ‘technical‘ ability of the operator. The opening left for urine and menstrual blood is minuscule. (Elnashar, 2007)

The operator applies a paste and ensures the adhesion of the large lips by means of three or four acacia thorns, which pierce one lip and pass through into the other. These thorns are then held in place either by means of sewing thread, or with horse hair. Circumcision is one of the traditions that prepare girls for womanhood. In some cultures girls experience genital mutilation in infancy, while in others it is done when the girl is of marriageable age. Traditionally, the role of the circumciser is an inherited one. In rural communities the Traditional Birth Attendant (TBA) is the circumciser. In recent years medically trained midwives and nurses have played an important role in the medicalization of the practice. Some doctors are also
providing circumcision, although most medical association condemn the practice. (*Elnashar, 2007*)

The procedure is carried out in remote areas as well as in cities and at all Levels of society from the elite and professional classes to the simplest Villager and most commonly on girls between the ages of four and twelve years either alone or in a community group. (*WHO, UNFPA, UNICEF, 2007*) It may be argued that because of the secrecy and illegalness that surrounds the practice, FGM is still predominantly performed at home. (*Bergreen, 2006*)

Because of poverty and lack of medical facilities, the procedure is frequently done under unhygienic conditions, often by non-medically trained personnel, and usually without anesthesia. Razor blades, knives or scissors are usually the instruments used. (*WHO, 2008*)

**1.4.5 The practitioners of female circumcision:**

According to UNICEF more than 60 percent of those performing genital mutilation are traditional midwives. Doctors account for less than one percent of those performing the procedure. Having learned their skill from mothers or other female relatives, local Community
members who perform circumcisions often practice as midwifery assistants. In rural areas older women who are known as traditional ‘cutters’ perform FGM. (SOAT, 1999)

1.4.6 Instruments of the operation:

The operation is done using sharp stones, knives, razors, scissors, vegetable thorn. Materials are: strings, threads, cloth soaked in special oil, paste, mixture of sugar and gum, and sometimes antiseptic, anesthesia, anti-tetanus injection and antibiotic sterile suture. The main instruments used for circumcision was knives 38.75%, followed by razors 30.2%, then scissors 22.8%, stones rarely used 0.6%. When distributed by types, knives were the main instrument in pharaonic 44.4%, and in sauna 38.75%, while for intermediate scissors were most commonly used 62.7% (El Darer, 1983).

1.4.7 Decision to Circumcise:

Pressure in relation to genital mutilation generally originates from within the family. Sometimes family members other than the parents decide the genital mutilation. In particular this applies to girls living
with their grandparents, and where one of the parents wants the procedure to be performed. (WHO, 2008)

Members of the family are usually involved in decision-making about female genital mutilation, although women are usually responsible for the practical arrangements for the ceremony. (UNICEF, 2005).

1.4.8 The continuation of the practice of female circumcision:

In society in which it is practiced, female genital mutilation is a manifestation of gender inequality that is deeply entrenched in social, economic and political structures. Like the now abandoned foot-binding in China and the practice of dowry and child marriage, female genital mutilation represents society’s control over women. Such practices have the effect of perpetuating normative gender roles that are unequal and harm women. Analysis of international health data shows a close link between women’s ability to exercise control over their lives and their belief that female genital mutilation should be ended. Female circumcision practices are deeply entwined with ethnic identity wherever they are found. Understanding this should provide
an important insight into the tenacity of the practice and people’s resistance to change efforts, and it can help to explain why the practice may even spread in certain situations. *(Gruenbaum, 2006)*

Where female genital mutilation is widely practiced, it is supported by both men and women, usually without question, and anyone departing from the norm may face condemnation, harassment, and ostracism. As such, female genital mutilation is a social convention governed by rewards and punishments which are a powerful force for continuing the practice. In view of this conventional nature of female genital mutilation, it is difficult for families to abandon the practice without support from the wider community. In fact, it is often practiced even when it is known to inflict harm upon girls because the perceived social benefits of the practice are deemed higher than its disadvantages *(UNICEF, 2005)*. Study in Sudan showed that majority of mothers, accounting for 81.2% of the total sample of 694 mothers practiced female circumcision to their daughters. *(Gruenbaum, 2006)*

When asked about their attitudes towards ending FGM, 30% of the female respondents in one study (Singhateh 1985) said it was an
important tradition that must be maintained. About 45% also said they would circumcise their daughters. (Leonard, 2000).

1.4.9 Re-infibulations:

Re-infibulation (RI), in Arabic called “Adal” is a unique practice, is becoming part of the Sudanese culture, thus contributing further to the negative impact of female genital mutilation. Re-infibulation practice involves tightening the vaginal opening by incisions on the two sides of the already mutilated labia majora and then suturing to leave a tight and small orifice. The practice has also further hazards on the health of the female. (Abdel Magied, 2003)

1.4.10 Female Sexual Acts:

1.4.10.1 Stimulation of female sexual act:

Successful performance of the female sexual act depends on both psychic stimulation and local sexual stimulation. Also, the thinking of erotic thoughts can lead to female sexual desire and these aids greatly in the performance of the female sexual act. Such desire is probably based as on physiological drive, thought sexual drive does increase in
proportion to the level of secretion of the sex hormones. Desire also changes during sexual month, reaching a peak near the of ovulation probably because of the high level of estrogen secretion time during the pre-ovulation period. Local sexual stimulation in women occurs as in men for massage, irritation, or other types of stimulation of perineal region sensation. The glands of the clitoris are especially sensitive for initiating sexual sensation. (Johnson, 2007)

1.4.11 Complications and effects of FGM/C:

The specific impact of FGM/C on the health of a girl or woman depends on a number of factors, including the extent and type of the cutting, the skill of the operator, the cleanliness of the tools and of the environment, and the physical condition of the girl or woman. Severe pain and bleeding are the most common immediate consequences of all forms of FGM/C. As the great majority of procedures are carried out without anesthetic, the pain and trauma experienced can leave a girl in a state of medical shock. In some cases, bleeding can be protracted and girls may be left with long-term anemia (Leonard, 2000)
1.4.11.1 Immediate problems:

Immediate complications include shock, severe pain and hemorrhage, which can lead to death. Urinary retention occurs nearly always because of the swelling, pain and burning sensation of urine on the raw wound; damage to the urethra and its surrounding tissue; labial adhesion or nearly complete closure of the vaginal orifice as in infibulation. ([Satti et al, 2006](#))

1-4-11-2 Long-term complications:

Long-term health problems (usually occurs to women with the most severe form of FGC): In severe cases, women are left with only a small opening for urinating and menstrual bleeding. This can slow or strain the normal flow of urine, which can cause infections. The most severe form of FGC leaves women with scars that cover most of their vagina. This makes sex very painful. These scars can also develop into bumps (cysts or abscesses) or thickened scars (keloids) that can be uncomfortable. Women who have had FGC sometimes have painful menstruation. They may not be able to pass all of their menstrual blood. They may also have infections over and over again. It can also
be hard for a health care professional to examine a woman’s reproductive organs if she has had a more severe form of FGC. Normal tools cannot be used to perform a Pap test or a pelvic exam. People who have no medical training, under unclean conditions, perform most forms of FGC. Many times, one tool is used for several procedures without sterilization. There is a growing concern that these conditions greatly increase the chance of spreading life-threatening infections such as hepatitis and HIV. Also, damage to the female sex organs during FGC can make the tissue more likely to tear during sex, which could also increase risk of STIs or HIV. (Leonard, 2000)

Infertility rates among women who have had FGC are as high as 25 to 30 percent and are mostly related to problems with being able to achieve sexual intercourse. The scar that covers the vagina makes this very difficult. Once pregnant, a woman can have drawn out labor, tears, heavy bleeding, and infection during delivery all causing distress to the infant and the mother. Health care professionals who are unfamiliar with the scar will sometimes recommend a cesarean section. This is not necessary as women will be able to deliver
vaginally once the scar is cut open. With rising numbers of young women coming to the United States from countries that practice FGC, U.S. doctors have begun caring for more and more patients who have been cut and facing some of these challenges. Based on a study of 28,000 women in 6 African countries, FGC is related to cesarean section, post-partum hemorrhage, and episiotomy, extended hospital stays, the need for infant resuscitation, and death. While about 5 percent of babies born to women without FGC were stillborn or died shortly after delivery, this figure increased to 6.4 percent in babies born to women with FGC. FGC is typically performed on very young girls. Some may not understand what is being done to them or why. The psychological effects of this painful experience are similar to those of post-traumatic stress disorder. Although very rare, girls and women who have had FGC may have problems sleeping, have more anxiety, and become depressed. (ALMROTH, 2001)

In countries where FGC is performed, leaders have tried to lessen the physical problems caused by FGC by asking hospitals and doctors to do the surgery. This “medicalization” of FGC offends the
international medical community, and is seen as a way for FGC supporters to continue the practice. Advocates have charged that doctors should not perform FGC, as their profession requires them to “do no harm” to their patients, despite cultural beliefs and practices (WHO, UNFPA, 2006)

1.4.11.3 Psychological complication:

It is difficult to differentiate between psychological effects and physical effects. Physical complications may lead to psychological complications such as irritability, anxiety reactions, depressive episodes and even psychosis. As FGM is performed during infancy, it is unlikely that the girl will remember the event itself, but the trauma will linger deep in her subconscious. Dr. Taha Baasher, a senior consultant psychiatrist, reported a case of a seven-year-old girl who experienced anxiety, sleeplessness, and hallucinations caused by fear of the operation. A 32-year-old woman had a reactive depression caused by delayed healing of circumcision scar. A nomadic woman was diagnosed as having ‘psychotic excitement’ caused by dermoid cyst of the size of a
tennis ball over her infibulations scar. She was twice divorced because of this state. Various types of psychosexual aberrations may occur. They are indicated by the use of excessive sexual taboos, sexual frigidity, pain during the sexual act and the monthly menstruation, painful de infibulation, forceful penetration and sometimes physical assault in intercourse by the husband. In human beings the ability to attain sexual pleasure (orgasm) is a complex process that involves the process of external genitals, appropriate hormonal stimulations and individual psychology. (Karrar, 1998)

The combination of physical message from sensory organs and emotional images culminates in a physiological state during which a person is able to experience orgasm. (Karrar, 1998)

Psychological effects cannot be predicted in all cases and some women may overcome them. But FGM may reduce women to sexual object and reproductive vehicles to men. The extent and nature of immediate and long-term mental disturbances depends on the child’s inner defense, the prevailing psychosocial environment and other
factors such as the child’s expectation of pain, the stories of sufferings and the sheer error of hearing the screaming of other children being circumcised. The fact remains that in spite of the festivities, gifts, and peer rivalry surrounding the ceremony of FGM most children experience, and overwhelming painful experience (Baasher, 1979)

1-4-12 Ages at which circumcision is done:

The age at which they circumcised girls varies according to culture within it the communities. In some cultures girls circumcised in infancy, while in others is done when the girl at the age of marriage. In Sudan the age ranges from (5-10) years, in Ethiopia at the 8th day after birth, in Somalia between (13-14) years, in Egypt (3-8) year, in Kenya shortly after marriage, while in some tribes of Guinea after the delivery of the first child. In Sudan, the most common age is between (5-9) years as shown by the Sudan fertility survey where it was reported that 74% of the women studied in the mentioned survey were circumcised before they were 10 years old. (Rahman, Toubia, 2000)
1-4-13 Reasons behind the Practice:

There are various reasons to explain the existence and continuation of the practice of FGM: custom, tradition (preserving virginity of young girls and limiting the sexual expression of women) and social reasons. These reasons do not justify the considerable damages to health. *(WHO, 2006)*

1-4-13-1 Socio-economic reasons:

In many regions women need to undergo FGM to get married. In those communities where women are economically dependent on men, the questioning of FGM is not a possibility. The economic disadvantages of FGM, such as medical costs or the loss of productivity because of illness, are often not recognized as being caused by FGM. Circumcisers themselves also gain a living through the performance of the “operations” and enjoy a certain status as guardians of tradition, two factors that have an influence on the resistance to abandon FGM *(Talle,2007)*. Girls who have not undergone FGM are subjected to great social pressure. They are
ridiculed and called ghalfa (uncircumcised), impure and undesirable or attractive trait in the context of marriage. (Berggren et al, 2006)

1-4-13-2 Sexual Reasons:

The sexual reasons behind the practice of FGM involve the woman and man. FGM is believed to ensure virginity until marriage, because it makes a woman less vulnerable to sexual temptation. Besides, this it is thought to cure sexual aberrations like nymphomania, emotional disorders, hysteria, masturbation, lesbianism and frigidity and it represses women’s excessive sexuality (Al Fadil, 2000)

FGM makes vaginal intercourse more desirable than clitoral stimulation. It is even believed to enhance vaginal orgasm due to functions against the walls of the tight vagina. This cannot be the case as the vagina has no nerve endings nor the sexual capacity to be the main focus or creator of the orgasm. Last but not least people think FGM enhances the husband’s sexual pleasure. (Al Fadil, 2000)
1-4-13-3 Gender Issues:

Men’s sexual freedom is promoted where as women are converted to their husbands private properties. Circumcised woman feel pain instead of pleasure during sexual intercourse. Thus, they become the vessels for men’s pleasure. For many men sexual activity is a source of pride, while women’s sexuality is dangerous and need to be curtailed. The chastity of the women represents the honor of the family and any violation must be punished sometimes by death penalty. FGM reflects a pattern of female domination with emphasis on virginity, fidelity, sexual double standards and other sexual values pertaining to the practical organization of many nomadic societies. Girls were regarded as economic assets in Arab, African, and middle eastern societies. They are property of men. As strict seclusion was impossible among some ethnic groups, infibulations was the most effective way to keep the girl’s virginity intact to ensure a high bride price (Karrar, 1998)
Women with little or no education are more likely to support the practice than those with a secondary or higher education. (SOAT, 1999)

1-4-13-4 Religious Reasons:

FGM is practice of culture not of religion. It is often associated with Islam because some African Muslims communities cite religion as the reason for performing it and because westerners have mistakenly related FGM to Islam. In fact FGM precedes Islam in Africa. It is most likely that some religious leaders seeking political support from people allowed the practice to continue. People tends to think that Islam sanctions a mild form of operation called “sauna”. This is a misconception. Neither the Koran nor the “Hadeith” include a direct call for FGM. The Koran Kareem states; men have authority over women because Allah has made the one superior to the other and because they spend their wealth to maintain them. (sura Nissa:33). The Nissaa sura in Koran includes all the important social issues concerning women. Circumcision for women is not mentioned. There is no major Islamic citation that makes FGM a religious requirement. Islamic jurists often quote the
Hadith of Om Attiya: (The prophet told an African woman (Ethiopian) in Medina, who performed FGM, (Touch but not destroy, because it is more illuminating to the woman and more enjoyable to the husband). The words of the prophet, if accepted without authentication, indicate a rejection; not an acceptance or reinforcement. The “Hadith” indicates enough evidence to show that the attitude of Islam towards the sexual pleasure of both sexes is positive. The “sauna” circumcision, which is practiced, varies extensively, while the real “sauna” of the prophet Mohammed are clear-cut and well defined. Religious interpretation vary from imam to imam (Malike, Hanifa, Shafie, Hanbal), and from time to time. It is the responsibility of women to challenge the multiplicity of interpretations of religions and legends that are deliberately to sanction practices that mutilate them physically. All this clarifies that FGM is not a mandatory practice in Islam. (Karrar, 1998). Even though the practice can be found among Christians, Jews and Muslims, none of the holy texts of any of these religions prescribes female genital mutilation and the practice pre-dates both Christianity and Islam. (WHO, UNFPA, 2006)
Religious affiliation is one of the factors determining which type of genital mutilation is to be performed (UNICEF, 2005). Religious leaders take varying positions with regard to FGM: some promote it, some consider it irrelevant to religion, and others contribute to its elimination. (SOAT, 1999)

1-4-14 Statements from Islamic and Coptic church leaders:

“Islamic Shari’a protects children and safeguards their rights. Those who fail to give rights to their children commit a major sin. FGM is a medical issue, what doctors say we heed and obey. There is no text in Shari’a, in the Koran, in the prophetic Sunna addressing FGM.” The Grand Imam, Sheikh Mohammed Sayed Tantawi, Sheikh of Al-Azhar.

“It has been proven to us with authenticated religious evidence that there is no rightful Shariat evidence on which to base the legitimacy of any form of FGM/C. Moreover any type has associated harm, as stated by trusted doctors.” Signed statement by 30 Sheikhs from the eight largest Sufist groups in Sudan, 2004 From the Christian perspective – this practice has no religious grounds whatsoever. Further, it is medically, morally and practically groundless. When God created the human being, he made everything in him/her good: each organ has its
function and role. So, why do we allow the disfiguring of God’s good creation? There is not a single verse in the Bible or the Old or New Testaments, nor is there anything in Judaism or Christianity – not one single verse speaks of female circumcision.” Bishop Moussa, Bishop for Youth of the Coptic Orthodox Church and Representative of Pope Shenouda (*Afro-Arab’s statement, 2003*)

1-4-15 Efforts to Stop the Practice:

1-4-15-1 The early efforts:

In 1930 a British member of parliament attacked the custom and urged the Colonial administration in Sudan to take steps to prohibit it by law. Dr. Attabani wrote an article attacking female circumcision in newspaper when he was a student in the medical school in 1930. In 1943 the general governor of the Sudan published a report by medical services, signed by nine members, the report include the danger of the practice. This was followed by the mufti sheikh Ahmed Altahir, who clearly indicated that Islam opposed to the custom. In 1947 the national committee for fighting circumcision was formed with members from
various social categories. Number of leaders condemned the custom and encouraged their followers to do likewise. (Karrar, 1998)

1-4-15-2Current Sudanese Organizations Fighting Female Circumcision:

The most outstanding organizations fighting female circumcision in Sudan are: - Babikir Badri Scientific Association for Women Studies and the Sudanese National Committee on the eradication of the traditional practices affect the health of women and children. Both organizations succeeded in bringing the issue to the surface of health problems area. Information is made accessible to broad range of educated women and men and disseminated on a wide scale. Substantial body of public opinion has been raised against the practice. (Abdel Magied, 2001).

Despite the fact that FGM/C is still widely practiced in all regions of northern Sudan, women’s intention to circumcise their daughters has decreased significantly over the last 16 years, attitudes have positively changed. A number of social networks and pressure group have emerged and voiced a consistent and clear stance against FGM/C.
Among women who are against FGM, the main reasons given are medical complications and pain. (Obermeyer, 2005)

**1-4-15-3 The Role of Students:**

Students need to be personally convinced and sincerely committed to fight the practice and not to exercise circumcision on their children in the future. The students can play a role in communication of the positive information to members of their families and other members of the society. They can participate in professional associations’ national and international organization working in fighting the practice. Also, they can contribute by writing articles and research activities. (Abdel Magied, 2001)

**1-4-15-4 Empowerment of women:**

As female genital mutilation is a manifestation of gender inequality, the empowerment of women is of key importance to the elimination of the practice. Addressing this through education and debate brings to the fore the human rights of girls and women and the differential treatment of boys and girls with regard to their roles in society in...
general, and specifically with respect to female genital mutilation. This can serve to influence gender relations and thus accelerate progress in abandonment of the practice (WHO, 2000; Population Reference Bureau, 2001, 2006; UNICEF, 2005; UNFPA, 2007).

Programs which foster women’s economic empowerment are likely to contribute to progress as they can provide incentives to change the patterns of traditional behavior to which a woman is bound as a dependent member of the household, or where women are losing traditional access to economic gain and its associated power. Gainful employment empowers women in various spheres of their lives, influencing sexual and reproductive health choices, education and healthy behavior (UNFPA, 2007).

Education, especially of women, can play an important role in safeguarding the human rights of both women themselves, and those of their children. Overall, daughters of mothers who are more highly educated are less likely to have undergone FGM/C than daughters of mothers with little or no education. (UNICEF, 2005). Most women think that female circumcision could be eradicated by health education. (Morison et al, 2001)
1-4-16 Legislation against genital mutilation

The current penal code, however, does not cover genital mutilation, although its provisions on “physical injury” might potentially cover genital mutilation, Nahid Jabrallah mentioned in May 2005 that the authorities issued a decree in 2003, outlining that health personnel were not permitted to perform genital mutilation. Nor are they allowed to perform reinfibulation. However, lack of statutory prohibition makes it difficult to bring matters in before the courts. The network against genital mutilation is lobbying for statutory prohibition. At the request of the authorities, the network has drafted a legislative proposal. While the proposal is completed, the political process of getting it through the Council of Ministers and parliament has only just begun. (Berggren et al, 2008)

1-4-17 Perception of legislative action against FGM:

Passing anti-FGM legislation has been one of the most controversial aspects of the FGM elimination movement. On the one hand, the new law has been seen by many as a force which will bring us closer to eradicating FGM entirely. On the other, it has been argued that legislation against FGM, without robust political commitment and
other proactive interventions (media campaigns, community education and empowerment programs), leaves such legislation as meaningless.

Advantages of legislating against FGM In the main, activists and analysts have maintained that one of the important advantages of legislating against FGM is that it provides an official platform to back up their positions by empowering them with the necessary legal support. Moreover, it gives the relevant authorities (health professionals, police, social workers) the legitimacy to intervene, and ‘makes them brave enough to come forward without fear that they are being racist or culturally insensitive. (Obermyer, 2005)

In an interview with Comfort Momoh, a specialist midwife on FGM, she stated that such legislation was important in the UK, as it gave health professionals an official reason for rejecting the medicalization of the practice and for refusing to comply with demands for re-infibulation after delivery. In addition, a law means that members of the practicing communities who do not want to carry out FGM on their girls can invoke the law to back up their position. The sanctions of the law may also act as a deterrent to those who may want to continue the practice, but
fear prosecution. (Obermyer, 2005)

Laws have real consequences in fuelling eradication efforts, regardless of whether local individuals are actually prosecuted under them. Therefore the legislation against FGM is necessary in demonstrating to society that the practice is a violation of human rights and will not be tolerated by the state. If enforced correctly it could work to increase awareness by the general public and practicing communities on FGM and its consequences. It could also lead to an increase in resources for organizations and agencies working towards the elimination of FGM.

Recent research in African countries as Egypt, Somalia, Ethiopia, Northern Sudan and Djibouti reveals numerous reasons for a decline in FGM, for example, secondary education is associated with a four-fold increase in disapproval of FGM. Other reasons include: girls' refusal; greater access to health education; modernization with its resulting changes in lifestyle; fear of anti-FGM laws; public ridicule; and realization that FGM has no effect on girls' behavior. (Boyle; Preves, 2000)
The World Health Organization’s response to FGM:

The World Health Organization (WHO) has released several statements condemning the practice of FGM and it continues to campaign for an end to the practice. WHO has reviewed programs on the eradication of FGM and has published a review on what works and what does not. It has also published a guide to the management of pregnancy, childbirth and the postpartum period in the presence of FGM; a set of training manuals for nurses and midwives, teachers and students; a systematic review of the health implications of FGM; the results of a study in six African countries on FGM and obstetric outcome; and a progress newsletter on the practice. (Broussard, 2008)

Knowledge, beliefs, and attitudes to female genital mutilation (FGM) in Shao community of Kwara State, Nigeria:

To determine the level of knowledge, belief, and assess the attitude to female genital mutilation (FGM) and its complications in Shao community, Nigeria, a cross-sectional descriptive study with a health education intervention was used. A majority of respondents (99.5%) understood female circumcision to mean cutting off parts of the female
genitals. There was a high level of knowledge regarding most of the complications of FGM as more than 50% of respondents knew at least four complications of FGM. Awareness of the global anti-FGM campaign was also high (78.8%). The most common reasons proffered for the practice of FGM were based on tradition or religion. Paternal grandfathers (50.0%) and fathers (21.0%) were cited as decision makers in the family most often responsible for requesting FGM. Post-intervention results showed that there was a statistically significant increase in the proportion of respondents who know more complications of FGM and who have no intention of circumcising future female children. Despite a high level of knowledge regarding the complications of FGM and a high level of awareness of the global campaign against it, there still exists a high prevalence of practice of FGM in this community. FGM remains a pressing human rights and public health issue. It is our recommendation that this health education intervention strategy be replicated nationwide especially using mass media. (Amusan et al 2007)
Attitudes Surrounding the Continuation of Female Circumcision in the Sudan: Passing the Tradition to the Next Generation:

This research examines behavioral and attitudinal data in order to investigate the perpetuation of the practice of female circumcision, also known as female genital mutilation, in the Sudan. During the recent Sudan Demographic and Health Survey, women were asked about their own circumcisions, as well as those done or planned for their daughters, and they reported what they (and their husbands) felt about the continuation of the practice. We analyze the data on the likely prevalence of daughters' circumcisions, along with the attitudinal data on the continuation of the practice and on the preferred type of circumcision where continuation is supported. Close to 90% of all women surveyed either had circumcised or planned to circumcise all of their daughters. Roughly half of those women reported favoring the most severe procedures. The practice is thus likely to continue to be widely practiced, and the most severe forms may well continue to be most common. (Williams; Sobieszcz, 2007)
MATERIALS AND METHODS

2-1 The Study Design:

A cross-sectional descriptive community based study was conducted in Ombada locality, Elbugaa administrative unit with an aim to study knowledge, attitudes and practices among mothers towards female circumcision.

2-2 Study Area:

2-2-1 Location:

The study area (Elbugaa) is located in Ombada locality, Khartoum state; Elbugaa is bordered by Kordofan state in the West, Omdurman locality in the East and the South, and the River Nile state in the North. (Ombada locality records, 2010)

2-2-3 Health Services:

There are (8) governmental health centers and (23) private health centers. (Ombada locality records, 2010)
2-2-4 Water supply:

The main sources of water supply are ground water and river Nile via public water net. (Ombada locality records, 2010)

2-2-5 Environmental Sanitation:

2-2-5-1 solid waste:

The solid waste activities are carried by Khartoum Cleaning Project using house to house collection system and then transported to the final disposal site.

2-2-5-2 liquid waste:

Most of the houses utilized traditional pit latrine and ventilated improved pit latrine (VIP). (Ombada locality records, 2010)

2-2-6 Educational Services:

There are 37 kindergartens, 246 governmental basic schools, 32 private basic school and 11secondary schools in addition to 3 private secondary schools (Ombada locality records, 2010)
2-2-7 Economic Activities:

The people of the study area working in trade and free businesses and some of them working in governmental corporations. (Ombada locality records, 2010)

2-3 The Study population:

The total population of Ombada locality is more than two million people, while the population of the study area (Elbugaa) are about (412,859) person out of these (200,897) represents the study population’s mothers. (Ombada locality, 2010)

2-4 Sampling Techniques:

2-4-1 Sample Size:

Ombada locality is composed of four administrative units (Alsalam, Alamir, Elbugaa, Alreef algharbi) of these units one unit was selected through simple random sample technique which came out with Elbugaa administrative unit.

Two residential areas were selected through simple random sampling technique which came out with (Elbugaa West) which it
contains 23 residential areas. One residential area was selected through simple random sampling technique which came out with (Elbugaa East) which it contains 14 residential areas. The sample size was determined using the following formula:

\[ n = \frac{N}{1+N(e)^2} \]

Where:

- \( n \): is the sample size.
- \( N \): is the total number of mothers=4564
- \( e \): is a marginal error (0.05).

<table>
<thead>
<tr>
<th>Residential area</th>
<th>Mothers’ numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbugaa west: (Abo zaid)</td>
<td>2217</td>
</tr>
<tr>
<td>Elbugaa west (Alrashidia)</td>
<td>557</td>
</tr>
<tr>
<td>Elbugaa east: (Elsabeel)</td>
<td>1790</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4564</strong></td>
</tr>
</tbody>
</table>
\[
\frac{4564}{1 + (4564)(0.05)^2} = 368
\]

Accordingly a sample of 368 families was obtained. Simple random sampling technique and systematic sampling was used to select the population for the study, the population unit of the study was household.

**2-4-2 Distribution of the Sample Size:**

The sample (368) was distributed over the three residential areas of the study according to the weight of each residential area as follows:

<table>
<thead>
<tr>
<th>Residential area</th>
<th>Mothers’ numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbugaa west: (Abo zaid)</td>
<td>2217</td>
<td>2774</td>
</tr>
<tr>
<td>Elbugaa west (Alrashidia)</td>
<td>557</td>
<td>(Abo zaid + Alrashidia)</td>
</tr>
<tr>
<td>Elbugaa east (Elsabeel)</td>
<td>1790</td>
<td>1790</td>
</tr>
<tr>
<td>Total</td>
<td>4564</td>
<td>4564</td>
</tr>
</tbody>
</table>
The weight: 2774: 1790 mothers

1.5 : 1

1.5 /2.5 x368=221 (mother) (Elbugaa west) Abo zaid +Alrashidia

1/2.5x 368 =147 (mother) (Elbugaa east) Elsabeel

Using systematic sampling technique the sample was distributed In (Elbugaa east: Elsabeel) by dividing the total number of mothers in (Elsabeel: 1790) over the selected number of mothers in (Elsabeel: 147) to get the constant (15) and then by lot, number between (1-15) was chosen to obtain a number (2) to be the number of the first mother and then add number 15 respectively 2, 17, 32, 47,…

In (Elbugaa west) the percentage of the sample size (221) was distributed according to the weight as follow:

<table>
<thead>
<tr>
<th>Residential area</th>
<th>Mother’s numbers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elbugaa west: (Abo zaid)</td>
<td>2217</td>
<td>2217</td>
</tr>
<tr>
<td>Elbugaa west (Alrashidia)</td>
<td>557</td>
<td>557</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>2774</td>
</tr>
</tbody>
</table>
The weight: 557: 2217 mothers

1: 4 = 5

1/5 x 221 = 44 (mother) (Alrashidia)

4/5 x 221 = 177 (mother) (Abo zaid)

Using systematic sampling technique the sample was distributed in (Alrashidia and Abo zaid) by dividing the total number of mothers in (Alrashidia: 557) and (Abo zaid: 2217) over the selected number of mothers in (Alrashidia: 44) and (Abo zaid: 177) respectively to get the constant (13) and then by lot, number between (1-13) was chosen to obtain a number (5) to be the number of the first mother and then add number 13 respectively 5, 18, 31, 44, …

2-5 Methods of Data Collection:

A prepared and tested questionnaire was used to collect data about knowledge, attitudes and practices among mothers towards female circumcision. The questionnaire contains four sections: demographic data, knowledge, attitudes and practices among mothers towards female circumcision.
2-6 Data analysis:

Data collected was analyzed by SPSS (Statistical Package for Social Science) version 13. The association between different variables was checked using $x^2$ – test and represented in figures and tables. The level of significance was taken at 0.05.
3. RESULTS

A cross-sectional descriptive community based study was conducted in Ombada locality, Elbugaa administrative unit with an aim to study knowledge, attitudes and practices among mothers towards female circumcision and revealed the following results.

Table (1): The distribution of the mothers according to the age - Elbugaa-2010

(n=368)

<table>
<thead>
<tr>
<th>Age / year</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-25</td>
<td>135</td>
<td>36.7</td>
</tr>
<tr>
<td>26-35</td>
<td>51</td>
<td>13.8</td>
</tr>
<tr>
<td>36-45</td>
<td>97</td>
<td>26.4</td>
</tr>
<tr>
<td>&gt; 45</td>
<td>85</td>
<td>23.1</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100</td>
</tr>
</tbody>
</table>

Table (1) showed that 36.7% of the mothers their ages were between 15-25 years, 13.8% their ages were between 26-35 year, 23.1% were in age >45 years.
Table (2) The distribution of the mothers according to the religion - Elbugaa-2010

(n=368)

<table>
<thead>
<tr>
<th>Religion</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muslim</td>
<td>311</td>
<td>84.5</td>
</tr>
<tr>
<td>Christian</td>
<td>57</td>
<td>15.5</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100</td>
</tr>
</tbody>
</table>

Table (2) showed that 84.5% of the mothers were Muslims, 15.5% of the mothers were Christians, 0% other.
Table (3) The distribution of the mothers according to the region – Elbugaa-2010

(n=368)

<table>
<thead>
<tr>
<th>Region</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern</td>
<td>173</td>
<td>47</td>
</tr>
<tr>
<td>Western</td>
<td>133</td>
<td>36.1</td>
</tr>
<tr>
<td>Eastern</td>
<td>5</td>
<td>1.4</td>
</tr>
<tr>
<td>Southern</td>
<td>57</td>
<td>15.5</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100</td>
</tr>
</tbody>
</table>

Table (3) showed that 47% of the mothers belong to the northern region, 36.1% of the mothers belong to the western region, 1.4% of the mothers belong to eastern region and 15.5% of the mothers belong to the southern region.
Table (4) The educational level of the mothers - Elbugaa -2010:

(n=368)

<table>
<thead>
<tr>
<th>Educational level</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>150</td>
<td>40.7</td>
</tr>
<tr>
<td>Khalwa</td>
<td>30</td>
<td>8.2</td>
</tr>
<tr>
<td>Basic/Elementary</td>
<td>41</td>
<td>11.1</td>
</tr>
<tr>
<td>Intermediate</td>
<td>91</td>
<td>24.7</td>
</tr>
<tr>
<td>Secondary</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td>University and post graduate</td>
<td>23</td>
<td>6.3</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100</td>
</tr>
</tbody>
</table>

Table (4) showed the educational level of the mothers distributed as: 40.7% of the mothers were illiterate, 8.2% their education was Khalwa, 11.1% their education was Basic/Elementary, 24.7% intermediate education, 9% their education was secondary and 6.3% of the mothers their level was university and post graduate.
Table (5) showed that 47.1% of the mother’s family their monthly income was less than 250 SDG, 12.5% of the mother’s family their income was more than 450 SDG.
Table (6): The knowledge among mothers towards female circumcision - Elbugaa -2010

(n=368)

<table>
<thead>
<tr>
<th>Know</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>368</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100</td>
</tr>
</tbody>
</table>

Table (6) revealed that all mothers 100.0% knew female circumcision.
Table (7) Definition of female circumcision according to the mothers’ knowledge- Elbugaa-2010

(n=368)

<table>
<thead>
<tr>
<th>Definition</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partial removal.</td>
<td>190</td>
<td>51.6</td>
</tr>
<tr>
<td>Total removal.</td>
<td>148</td>
<td>40.2</td>
</tr>
<tr>
<td>All mentioned</td>
<td>23</td>
<td>6.3</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table(7) showed that 51.6% of the mothers defined female circumcision as a partial removal of female genitalia, 40.2% of them defined it as total removal, 6.3 of them said all mentioned and 1.9% said others(sewing of the genitalia, …)
Table (8): Types of female circumcision according to the mothers’ knowledge - Elbugaa - 2010

(n=368)

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I (Sauna)</td>
<td>158</td>
<td>42.9</td>
</tr>
<tr>
<td>Type II (Intermediate)</td>
<td>59</td>
<td>16</td>
</tr>
<tr>
<td>Type III (Pharaonic)</td>
<td>114</td>
<td>31</td>
</tr>
<tr>
<td>All of the above</td>
<td>37</td>
<td>10.1</td>
</tr>
<tr>
<td>Total</td>
<td>368</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (8) showed that 42.9% of the mothers knew Type I, 16% of them knew Type II, and 31% of them knew Type III and 10.1% of the mothers knew all the types of female circumcision.
Figure (I) Presence of complications of female circumcision according to the mothers’ knowledge- Elbugaa -2010

(n=368)

Figure (I) illustrated the knowledge of the mothers about the complications of (FC) as follow: 75.0% of the mothers knew that female circumcision had complications, and 25% of them didn’t know that female circumcision had complications.
Figure (II): Types of complications of female circumcision according to the mothers’ knowledge-Elbugaa -2010

n=276

Figure (II) showed the types of complications of (FC) according to the mother’s knowledge as follows: 30% of the mothers thought that the complication was urine retention, 25% hemorrhage, 17% wound infection, 9% psychological trauma, 3% surrounding tissues damage, 16% other as (Painful sex, School dropout, Can lead to death, Lack of sexual satisfaction…)
Figure (III) demonstrated the possibility of (FC) eradication according to the mother’s knowledge as follows: 85.0% of the mothers knew that (FC) could be eradicated, and 15.0% of them said that it couldn’t be eradicated.
Table (9): The best method that may encourage female circumcision’s eradication according to the mothers’ knowledge- Elbugaa -2010 (n=311)

<table>
<thead>
<tr>
<th>The method</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health education</td>
<td>185</td>
<td>59.5</td>
</tr>
<tr>
<td>Religious instructions</td>
<td>27</td>
<td>8.7</td>
</tr>
<tr>
<td>Laws</td>
<td>60</td>
<td>19.3</td>
</tr>
<tr>
<td>All of the above</td>
<td>36</td>
<td>11.6</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>311</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (9) showed the best method that may encourage eradication of female circumcision according to mother’s knowledge as follows: 59.5% health education, 8.7% religious instruction, 19.3% laws, and 11.6% the entire above and 0.9% other.
Table (10): The distribution of mothers according to practicing female circumcision - Elbugaa -2010

\[
\begin{array}{|c|c|c|}
\hline
\text{Practice} & \text{No.} & \% \\
\hline
\text{Yes} & 295 & 80.2 \\
\hline
\text{No} & 73 & 19.8 \\
\hline
\text{Total} & 368 & 100 \\
\hline
\end{array}
\]

Table (10) showed that 80.2% of the mothers practiced female circumcision, and 19.8% didn’t practice it.
Table (11): The reasons behind practicing female circumcision among practicing mothers - Elbugaa -2010

(n=295)

<table>
<thead>
<tr>
<th>The reason</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insure virginity.</td>
<td>154</td>
<td>52.2</td>
</tr>
<tr>
<td>Avoid social stigma.</td>
<td>30</td>
<td>10.2</td>
</tr>
<tr>
<td>Religious.</td>
<td>97</td>
<td>32.9</td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
<td>4.7</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (11) demonstrated the reasons behind practicing (FC) according to the mothers as follows: 52.2% out of 295 mother who practice female circumcision) practiced it to insure girl’s virginity, 10.2% to avoid social stigma, 32.9% religious reasons, 4.7% other reasons as(good for prospective marriages, enhance husband pleasure, improves fertility…)
Table (12): The reasons behind not practicing female circumcision among not practicing mothers -Elbugaa -2010

(n=73)

<table>
<thead>
<tr>
<th>The reason</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful practice</td>
<td>57</td>
<td>78.1</td>
</tr>
<tr>
<td>No religious origin</td>
<td>9</td>
<td>12.3</td>
</tr>
<tr>
<td>Others</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table(12) showed that 78.1% out of those not practice(73 mother)didn’t practice it because it is a harmful habit, 12.3% didn’t practice it because it has no religious origin, 9.6% other reasons as(lost significance, affect girls education, uncircumcised girls are married, health complications)
Figure (IV): The practitioners of female circumcision as mentioned by practicing mothers - Elbugaa-2010

\((n=295)\)

Figure (IV) illustrated that 88.1% of female circumcision’s operations performed by Traditional Birth Attendant (TBA), 10% by nurse, and 1.9% others (doctors, old women)
Table (13) Places where female circumcision was practiced as mentioned by the practicing mothers - Elbugaa - 2010

<table>
<thead>
<tr>
<th>Place</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home</td>
<td>291</td>
<td>98.6</td>
</tr>
<tr>
<td>Hospital</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Clinics</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>295</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (13) showed that 98.6% of female circumcision’s operations practiced at home and no one practiced it at hospital or clinics. 1.4% of the operations practiced in other places as (Circumciser’s home, Relative's home and Friends home)
Table (14): The instruments used in female circumcision as mentioned by the practicing mothers - Elbugaa -2010

(n=295)

<table>
<thead>
<tr>
<th>Instrument</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knives</td>
<td>198</td>
<td>67.1</td>
</tr>
<tr>
<td>Razors</td>
<td>36</td>
<td>12.2</td>
</tr>
<tr>
<td>Scissors</td>
<td>20</td>
<td>6.8</td>
</tr>
<tr>
<td>All the above</td>
<td>39</td>
<td>13.2</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>295</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (14) showed the distribution of the instruments used in female circumcision as follows: 67.1% of instruments were knives, 12.2% razors, 6.8% scissors, 3.2% all of the above and 0.7% other instruments, as (sharp stones, vegetable thorns...).
Figure (V): The decider to perform female circumcision as mentioned by the practicing mothers - Elbugaa -2010

Figure (V) illustrated the decider to perform (FC) according to mothers as follows: 64% of the mothers said that all family members decide to perform female circumcision in family, 36% of the mothers said that parents decide to perform female circumcision in family.
Figure (VI): Attitudes among mothers towards female circumcision-Elbugaa -2010

(n=368)

Figure (VI) illustrated the attitudes of the mothers towards (FC) as follows: 71.5% of mothers had positive attitude, and 28.5% had negative attitude.
Table (15) The reasons behind mothers’ positive attitude towards female circumcision –Elbugaa-2010

( n=263)

<table>
<thead>
<tr>
<th>The reason</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tradition</td>
<td>14</td>
<td>5.3</td>
</tr>
<tr>
<td>Good for prospective marriage</td>
<td>78</td>
<td>29.7</td>
</tr>
<tr>
<td>Preserve virginity</td>
<td>72</td>
<td>27.4</td>
</tr>
<tr>
<td>Husband pleasure</td>
<td>30</td>
<td>11.4</td>
</tr>
<tr>
<td>Remove dirty genitalia</td>
<td>15</td>
<td>5.7</td>
</tr>
<tr>
<td>Religious</td>
<td>50</td>
<td>19</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>263</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (15) showed distribution of the reasons behind mothers’ positive attitude towards female circumcision as follows: 5.3% of the mothers because it is tradition, 29.7% said it is good for prospective marriage, 27.4% preserve virginity, 11.4% said it enhance husband pleasure, 5.7% said it removes dirty genitalia, 19% like it for religious reasons, 1.5% for other reasons (Social acceptance, Improves fertility..)
Table (16) The reasons behind mothers’ negative attitude towards female circumcision –Elbugaa-2010

(n=105)

<table>
<thead>
<tr>
<th>The reasons</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health complications</td>
<td>35</td>
<td>33.4</td>
</tr>
<tr>
<td>Uncircumcised are married</td>
<td>10</td>
<td>9.5</td>
</tr>
<tr>
<td>Affects girls education</td>
<td>17</td>
<td>16.2</td>
</tr>
<tr>
<td>Against religion</td>
<td>23</td>
<td>21.9</td>
</tr>
<tr>
<td>Against dignity of women</td>
<td>14</td>
<td>13.3</td>
</tr>
<tr>
<td>Other,</td>
<td>6</td>
<td>5.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>105</td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Table (16) revealed the distribution of the reasons behind mothers’ negative attitude towards (FC) as follows: 33.4% of the mothers because of its health complication, 9.5% said that; uncircumcised girls are married, 16.2% said that it affects girls education, 21.9% because it is against religion, 13.3% said that it is against dignity of women, 5.7% for other reasons (Painful experience, Against the law,..)
Table (17): Preference of a certain type of female circumcision as mentioned by practicing mothers- Elbugaa -2010

(n= 295)

<table>
<thead>
<tr>
<th>Preference</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>198</td>
<td>67.1</td>
</tr>
<tr>
<td>No</td>
<td>97</td>
<td>32.9</td>
</tr>
<tr>
<td>Total</td>
<td>295</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (14) showed that (67.1%) of the mothers preferred certain types of female circumcision, (32.9%) didn’t prefer certain type of female circumcision.
Table (18): The type of female circumcision preferred by the mothers - Elbugaa -2010

(n=198)

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I (Sauna)</td>
<td>87</td>
<td>43.9</td>
</tr>
<tr>
<td>Type II (Intermediate)</td>
<td>75</td>
<td>37.9</td>
</tr>
<tr>
<td>Type III (Pharaonic)</td>
<td>36</td>
<td>18.2</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (18) demonstrated the preferable types of (FC) according to mothers as follow: 43.9% of the mothers preferred Type I (sauna), 37.9% preferred Type II (intermediate), and 18.2% preferred Type III (pharaonic).
Table (19): The reasons behind preferring certain type of female circumcision as mentioned by the mothers - Elbugaa -2010

(n=198)

<table>
<thead>
<tr>
<th>The reasons</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>No health complications</td>
<td>83</td>
<td>42</td>
</tr>
<tr>
<td>Religious origin</td>
<td>104</td>
<td>52</td>
</tr>
<tr>
<td>All mentioned</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>198</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table (19) emerged the reasons for preferring specific type of (FC) as mentioned by the mothers as follow: 42% of the mothers preferred certain type of (FC) because it has no complications, 52% of the mothers preferred certain type of (FC) for a religious reasons, 4% all mentioned and 2% for other reasons. (Tradition demands, Preserve virginity...
Figure (VII): Attitudes among mothers towards combating female circumcision -Elbugaa-2010

Figure (VII) showed the attitude of the mothers towards combating (FC) as follow: 62% of the mothers had positive attitude towards combating female circumcision, and 38% of the mothers had negative attitude towards combating female circumcision.
Figure (VIII): Reasons behind positive attitude among mothers regarding combating female circumcision - Elbugaa -2010

(n=230)

Figure (IX) illustrated reasons behind positive attitude among mothers regarding combating female circumcision as follows: 47.0% of mothers had positive attitude towards combating (FC) because it is harmful practice, 13% because it has no religious origin, 33% because it is harmful practice, 7% others as (Against dignity of women, Pain, Uncircumcised are married)
Figure (IX): Reasons behind negative attitude among mothers regarding combating female circumcision – Elbugaa -2010

(n=138)

Figure (XI) illustrated the reasons behind negative attitude among mothers regarding combating female circumcision as follow: 39.1% of the mothers had negative attitude regarding combating female circumcision (FC) for the virginity reasons, 17.1% for hygiene and beauty reasons, 25.7% for social reasons, 11.4% for religious reasons, and 6.7% other reasons as (improves fertility, easy delivery, enhance husband pleasure, good for prospective marriages)
Figure (X): The distribution of mothers according to their expected future attitude towards circumcising their daughters - Elbugaa- 2010

(n=368)

Figure (X) illustrated the distribution of mother’s expected future attitude towards circumcising their daughters as follows: 59.0% of the mothers had a negative future attitude towards circumcising their daughters, and 41% of the mothers had a positive future attitude towards circumcising their daughters.
Figure (XI) Reasons among mothers behind their negative expected future attitude towards circumcising their daughters- Elbugaa-2010

\[ n=218 \]

Figure (XI) illustrated the reasons among mothers behind their negative expected future attitude toward circumcising their daughters as follows: 25% of the mothers had negative future attitude towards circumcising their daughters because it is against religion, 31% because it is painful experience, 10% because it limits education, 7.8% because it is against dignity of women, 18% because uncircumcised also get married and 8.2% other, as (Obstructed labor, Can lead to HIV infection, It is no longer practiced, Have heard messages on female circumcision...)

- 83 -
Figure (XII)  Reasons among mothers behind their positive expected future attitude towards circumcising their daughters- Elbgaa-2010

(n=150)

Figure(XII)  illustrated the reasons among mothers behind their positive expected future attitude towards circumcising their daughters as follows: 40% of the mothers had positive future attitude towards circumcising their daughters because of the social pressure, 35% of them for marriage prospect, 11% of them because of cleanliness, and 14% all of above.
Table (20) The association between practicing female circumcision by the mothers and their religion–Elbugaa-2010

<table>
<thead>
<tr>
<th>The practice</th>
<th>The religion</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Muslim</td>
<td>Christian</td>
</tr>
<tr>
<td>Yes</td>
<td>295(80.2%)</td>
<td>(0.0%)</td>
</tr>
<tr>
<td>No</td>
<td>16(4.5%)</td>
<td>57(15.5 %)</td>
</tr>
<tr>
<td>Total</td>
<td>311</td>
<td>57</td>
</tr>
</tbody>
</table>

$X^2=226.98$ \hspace{1cm} P value=0.05

The statistics showed a strong association between practicing female circumcision and mothers’ religion P value=0.05 as in table 20.
4.1 DISCUSSION

This study was conducted in Ombada locality, Elbugaa administrative unit with an objective to study knowledge, attitudes and practices among mothers towards female circumcision, and revealed the following findings:

The study revealed that in table (1) more than one third of the mothers (36.7%) their ages were between 15-25 years. The most recent survey data indicate consistently, for all countries, that women aged 15–19 are less likely to have been circumcised than women in the older age groups, which comply with that stated by (Kishor, 2000) (“women in the 15–29 age group are less likely to support the practice than women aged 30–49 years”).

The study showed that in table (2), some of the mothers (15.5%) were Christians all of them (100%) didn’t practice female circumcision and (84.5%) were Muslims, the majority of them (94.5%) practice female circumcision. The statistics shows a strong association between practicing female circumcision and mothers’ religion P value=0.05 as mentioned in table (20), which comply with that stated by (UNICEF, 2005) (“Muslim women are more likely to have circumcised daughters than women of other religious affiliations”).

Table(3) showed that near half of the mothers (47%) belong to the northern region, only (1.4%) of the mothers belong to the eastern tribes. Among all socio-economic variables, ethnicity appears to have
the most determining influence over FGM/C distribution within a country which goes with that stated by (Gruenbaum, 2006) (“many researchers have noted that FGC prevalence varies with ethnicity or that FGC serves as an ethnic marker”).

The study showed that in table (4) less than half of the mothers (40.7%) were illiterate and more than half of the mothers (59.3%) were educated. It can be expected that education will play a determining role in influencing a woman’s opinion regarding FGM/C and that educated women may be more aware of the negative health consequences of the practice. It is further hypothesized that women with higher education have greater access and exposure to media and advocacy messages, as well as possess greater awareness of the human rights implications. Education in this case is seen as a source of empowerment for women because it can facilitate their abilities to “gather and assimilate information, manipulate and control the modern world, and interact effectively with modern institutions, which comply with that stated by (SOAT, 1999) (“Women with little or no education are more likely to support the practice than those with a secondary or higher education”).

Table (5) near half of the mothers (47.%) were poor (their monthly income was less than 250 SP that may make the procedure done under unhygienic circumstances, which comply with that stated by (WHO, 2008) (“Because of poverty and lack of medical facilities, the procedure is frequently done under unhygienic conditions, often by
non-medically trained personnel, and usually without anesthesia. Razor blades, knives or scissors are usually the instruments used”).

Table(6) all of the mothers (100.0%) knew female circumcision. Female circumcision commonly known as female genital mutilation is highly prevalent in Sudan it also known in most areas in Sudan, which comply with that stated by (Bergreen, 2006) (“Female genital mutilation or Female circumcision is known and practiced in all regions of northern Sudan”)

Figure (II) less than one third of the mothers (30%) knew that urine retention is a common health complication of female circumcision, Urine retention from swelling and/or blockage of the urethra, may be one of the common immediate complications of female circumcision, which comply with that stated by (Satti et al, 2006) (“Urinary retention occurs nearly always because of the swelling, pain and burning sensation of urine on the raw wound; damage to the urethra and its surrounding tissue; labial adhesion or nearly complete closure of the vaginal orifice as in infibulation”)

Figure (III) most of the mothers (85%) knew that female circumcision could be eradicated, and (59.5%) of them knew the health education is the best method of eradication as in table 9, health education programs are critical to encourage combating of FGM/C by initiating a new projects to promote the methods of eradication FGM/C, increase mothers’ awareness of FGM ’complications through classes to improve mothers’ knowledge and skills towards combating
FGM, which comply with that stated by (Morison et al, 2001) (“Most women think that female circumcision could be eradicated by health education”)

The study showed that in table (10) most of mothers (80.2%) practice (FC) in their families, which comply with that stated by (Gruenbaum, 2006) (“study in Sudan showed that majority of mothers, accounting for 81.2% of the total sample of 694 mothers practiced female circumcision to their daughters”)

This study showed that in table (11) half of the mothers (52.2%) out of those (80.2%) who practice (FC) they practice it to insure girl’s virginity. Female circumcision is believed to preserve girls’ virginity which may in turn protects the family’s honor and improves a daughter’s marriage prospects it is also believed to attenuate the sexual temptation of female, which comply with that stated by (Al fadil, 2000) (“FGM is believed to ensure virginity until marriage, because it makes a woman less vulnerable to sexual temptation.”)

The study illustrated that in figure (IV), the majority of the mothers (88.1%) circumcised their daughters by traditional midwives. The procedure is usually carried out by traditional midwives in Arabic called (daya) who have themselves been mutilated often become gatekeepers of the practice, which comply with that stated by (SOAT, 1999) (“According to UNICEF more than 60 percent of those performing genital mutilation are traditional midwives”)

Table (13) the study showed that, the majority of female circumcision’s operations (98.6%) had been practiced at home. This
may indicate that result is logical outcome of illegalness of the practice, which comply with that stated by (Bergreen, 2006) (“It may be argued that because of the secrecy and illegalness that surrounds the practice, FGM is still predominantly performed at home”).

Table (14) the study showed that, (55.2%) of the instruments used by the practitioners in female circumcision were knives, which may be rusty and dirty, which comply with that stated by (El Dareer, 1983): (“The main instruments used for circumcision were knives”)

The study illustrated that in figure (V) (64%) of the mothers said that family members were usually involved in decision-making about female genital mutilation, It could be argued that among all decision-making by a couple, this is of most crucial importance with regard to women’s self-interest. The ability to make decisions concerning their health should be in the hands of women themselves. However, women are often not the final arbiters; women often share these decisions with husbands, partners or someone else. In many instances, it is husbands alone who have the prerogative to make decisions about the health care of their wives, which comply with that stated by (UNICEF, 2005). (“Members of the family are usually involved in decision-making about female genital mutilation, although women are usually responsible for the practical arrangements for the ceremony”).

Figures (VI) the majority of the mothers (71.5%) had positive attitude towards female circumcision, female genital mutilation is a social convention governed by rewards and punishments which are a powerful force for existing and continuing the practice, which not
comply with that stated by (Nylund and Ahmed, 2009) (“over the last 16 years, attitudes have positively changed ”)

The study showed that more than one quarter of the mothers (29.7%) out of those who had positive attitude towards female circumcision, had positive attitude towards female circumcision because they think that it is good for prospective marriages. FGM is often considered a necessary part of raising a girl properly, and a way to prepare her for adulthood and marriage, which comply with that stated by (Talle, 2007) (“In many regions women need to undergo FGM to get married”)

The study illustrated that one third of the mothers (33.4%) out of those whom had negative attitude towards female circumcision they had negative attitude towards female circumcision because of its health complication. that may be because they have heard messages on the complications of female genital mutilation which is associated with a series of health risks and consequences, which comply with that stated by (Obermeyer, 2005) (“Among women who are against FGM, the main reasons given are medical complications and pain”)

The study showed that in table(19) half of the mothers (52.2%) prefer type I “Sunna type”, the word (Sunna) is misleading as its literal meaning in Arabic is “following the prophet’s acts.” In local Sudanese Arabic when pronounced (sinna) it means “a small piece of something” which could be the clitoris in the case of FGM. FGM is primarily a social practice, not a religious one, female genital mutilation predated Islam which comply with that stated by (karrar,
There is no Islamic citation that makes FGM a religious requirement”)

The study showed that most of the mothers (62%) had positive attitude towards combating female circumcision and (47.0%) of them had positive attitude because it is harmful practice, FGM threatens the mental, physical, and psychosocial health of women and girls and violate human rights standards, which comply with that stated by (Johnson, 2007) (“Among women who are agree with combating FGM, the main reasons given are medical complications and pain. Other reasons include: it is seen as a harmful practice; it counters religious belief; it prevents sexual satisfaction; and it diminishes a woman's dignity”).

The study showed that in figure (VII) more than one third of the mothers (38%) had negative attitude towards combating female circumcision, they favor not combating FGM for many reasons such as custom and tradition demand, better marriage prospect, social acceptability and preservation of virginity...etc which comply with that stated by (Leonard, 2000) (“When asked about their attitudes towards ending FGM, 30% of the female respondents in one study (Singhateh 1985) said it was an important tradition that must be maintained. About 45% also said they would circumcision their daughters”).

The study illustrated that in figure (IX), (39.1%) of the mothers had negative attitude towards combating FC because it keeps virginity of girl , that may be because of the traditional perception that
female circumcision is safeguard of virginity of girl, which comply with that stated by (WHO, 2006) (“There are various reasons to explain the existence and continuation of the practice of FGM: customs, tradition (preserving virginity of young girls and limiting the sexual expression of women) and social reasons”)

The study showed that in figure (X) more than half of the mothers (59.0%) their expected future attitude to circumcise their daughters was negative, the most common reason evoked for supporting not circumcising daughters in the future is the belief that the practice is painful experience and it is against religion, uncircumcised also get married etc, which comply with that stated by (Nylund and Ahmed, 2009) “(women’s intention to circumcise their daughters has decreased significantly”) and (25%) of the mothers who have a negative expected future attitude to circumcise their daughters, they do because it is against religion. Increasing awareness of mothers about misconceptions that the practice of FGM/C is required by Islam leads to that positive change of not circumcising daughters in the future, which comply with that stated by (WHO, UNFPA, 2006) (“Even though the practice can be found among Christians, Jews and Muslims, none of the holy texts of any of these religions prescribes female genital mutilation and the practice pre-dates both Christianity and Islam”)

The study showed that less than half of the mothers (40%) their reason behind the positive expected future attitude towards
circumcising their daughters was social pressure, the persistence of FGM comes from deep-rooted traditions within the societies these are practices, FGM is traditionally practiced as a ritual signifying the acceptance of a woman into society and establishes her eligibility for marriage which comply with that stated by (Berggren et al., 2006) (“Girls who have not undergone FGM are subjected to great social pressure. They are ridiculed and called ghalfa (uncircumcised), impure and undesirable or attractive trait in the context of marriage”)
4-2 CONCLUSION:

This descriptive community based study was conducted with an objective to study the knowledge attitude and practices among the mothers towards female circumcision in Umbada locality –Elbugaa unit, it revealed the following findings:

Knowledge findings:

-All of the mothers (100%) knew female circumcision.
-Near half of the mothers (42.9%) knew “sunna circumcision
-Majority of the mothers (75%) knew the health complications of female circumcision.
-The majority of the mothers(30%) knew that urine retention is a common health complication of female circumcision.
-Majority of the mothers (85%) knew that female circumcision could be eradicated.
-More than half of the mothers (59.5%) knew that female circumcision could be eradicated by health education.

Attitude findings:

-The majority of the mothers (71.5%) their attitude towards female circumcision was positive.
-Knives were main instruments which used in (55.2%) female circumcision ‘operations.
-Majority of the mothers (64%), the decision on whether to circumcise or not rested entirely on the family members.
- More than one quarter of the mothers (29.7%) out of those whom had positive attitudes towards female circumcision, because they thought that it is good for prospective marriages.

- Near one third of the mothers (33.4%) out of those whom had negative attitudes towards female circumcision because of its health complication.

- Half of the mothers (52.2%) preferred “Sunna” type.

- More than half of the mothers (62%) had positive attitude towards combating female circumcision and (47.0%) of them because it is harmful practice.

- More than half of the mothers (59.0%) had negative future attitude to circumcise their daughters in the future.

- Less than half of the mothers (40%) had positive future attitude towards circumcising their daughters because of a social pressure.

**Practices findings:**

- Most of mothers (80.2%) practiced female circumcision to their daughters.

- Half of the mothers (52.2%) practiced female circumcision to their daughters to insure girl’s virginity.

- The majority of the mothers (88.1%) their daughters had been circumcised by traditional midwives.

- Most of the mothers (98.6%) their daughters had been circumcised at home.
4-3 Recommendations:

A-Knowledge recommendations:

Health education program is strongly recommended:

- To support and enhance awareness among mothers about harmful traditional practices include female circumcision, based on credible research findings, documentation.
- To sustain and reinforce the knowledge about the health complication of female circumcision among mothers.
- To sustain and reinforce the knowledge about the possibility of eradication of female circumcision among the mothers.
- The mothers’ knowledge of the complications caused by female circumcision should be utilized to fight the existence of this medieval practice.

B-Attitude recommendations:

Health education program is strongly recommended:

- To sustain and promote the negative attitude among mothers towards female circumcision.
- To change and discourage the positive attitude among mothers towards female circumcision.
- To support and enhance the positive attitude among the mothers towards combating female circumcision and to change the negative attitude among the mothers towards combating female circumcision.
C-Practices recommendations:

Health education program is strongly recommended:

- To change the negative behavior (practicing female circumcision) by the mothers.
- To reinforce the positive behavior (not practicing female circumcision) by the mothers. As increased health education of the mothers appears to be major factor in combating female circumcision, efforts to promote health education massages directing to the mothers would have to be central to the long-term strategy.
- To eliminate the practicing of female circumcision among mothers.
- Passing anti-FGM legislations and laws with robust political commitment.
4-4 APPENDICES:

4-4-1 References:


Department of statistics, Federal Ministry of Economic and National planning, (2011): Sudan Demographic and Health Survey (SDHS). Khartoum -Sudan- FMENP.


**UNFPA (2007).** Women’s Economic Empowerment: Meeting the Needs of Impoverished Women. New York, UNFPA.


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Appendix No. (1) English Questionnaire

UNIVERSITY OF KHARTOUM
THE GRADUATE COLLEGE
Faculty of Public and Environmental Health

A questionnaire on the KAPS among mothers towards female circumcision-Elbugaa area 2010

(A): Demographic data:

1-Age / years:
   a-15-25 years (                      )   b-26-35 years (          )
   c-36-45 years (                      )   d- > 45 years (            )

2-Religion?
   a-Muslim (                         )   b-Christian (             )
   c-Other (                          )

3-what is your region?
   a- Eastern (                      )   b-Western (               )
   c-Northern (                     )   d-Southern (              )

4-Educational level:
   a-Illiterate (                   )   b-Khalwa (                )
   c-Basic/Elementary (            )   d-Intermediate (          )
   e-Secondary (                  )   f- University and post graduate (     )
5-Monthly income:

a-< 250 SDG ( ) b-251-350SDG ( )
c-351-450SDG ( ) d->450 SDG ( )

B-The knowledge:

6-Do you know female circumcision?

a-Yes ( ) b-No ( )

7-If the answer in question (6) is yes what is female circumcision?

a-a partial removal ( )
b-a total removal ( )
c-All mentioned ( )
d-other ( )

8-If the answer in question (6) is yes what are the types of circumcision?

a-Type I (suuna) ( ) b- Type II (intermediate) ( )
c- Type III (pharaonic) ( ) d-All of the above ( )

9-Do you think that, female circumcision has health complications?

a-Yes ( ) b-No ( )

10-If yes, what are these complications?

a-urine retention . ( ) b-hemorrhage ( )
c-wound infections ( ) d-psychological trauma ( )
e-surrounding tissue damage ( ) g-other ( ) please specify
11-Do you think that female circumcision could be eradicated?
   a-Yes (         )                                           b-No (       )

12-If yes, what is the best method for female circumcision eradication?
   a-Health education (   )                  b-Religious instructions (  ).
   c-Laws (   )                              d –All(        ) e-Others

C-The practice:

13-Do you practice female circumcision to your daughters?
   a-Yes (    )    b-No(    )

14-If the answer in question (13) is yes, what are the reasons?
   a- Insure virginity (   )   b-t avoid social stigma (   )
   c-Religious (     )          d-others

15-If the answer in question (13) is no, what are the reasons?
   a- Harmful habit (   )      b- no religious origins (    )
   c-Others (      )

16- Who is performing the operation of circumcision?
   a- Nurse (    )             b-Traditional midwife (    )
   e-Others (     )

17-In what place female circumcision is performed?
   a-home (    )                b-Hospital (    )    c-Clinics (    ) d-Others (     )
   specify…

18-What are the instruments used in female circumcision?
   a-knives (   )                 b-razors (    )
19- who decide to perform female circumcision in the family?
a-parents( ) b-family members( )

D-The attitude:

20-What is your attitude towards female circumcision?
a-positive( ) b-negative( )

21-If the answer in question(20) is negative, what are the reasons?
a-tradition( ) b-good for prospective marriage( )
c-preserve virginity( ) d-e husband pleasure( )
e-Remove dirty genitalia( ) f-religious( ) g-other( )specify…

22-If the answer in question(20) is negative, what are the reasons?
a-Health complications( ) b-Uncircumcised are married( )
c-Affects girls education( ) d-Against religion( )
e-Against dignity of women( ) f-others( )specify…

23-If the answer in question20 is negative; do you prefer specific type of female circumcision?
a- Yes ( ) b-No ( )

24-If the answer in question (23) is yes, what is your preferable type?
a-Type I(suuna)( ) b-Type II (intermediate)( ) c- Type III(pharaonic)( )

25-Why do you prefer that type?
a-Has no health complications( ) b-has religious origins( )
c-others ( ) specify

26-What is your attitude towards combating female circumcision?

a-positive ( )  b-negative ( )

27-If the answer in question (26) is positive, what are the reasons?

a- Harmful practice ( )  b-Has no religious origin ( )  c-Both a+b ( )  d-Other ( ) specify

28-If the answer in question (26) is negative, what are the reasons?

a-To insure girl’s virginity ( )  b-Social reasons ( )  c-Hygiene and beauty ( )

d-Religious reasons ( )  e-others ( )

29-what is your future attitude towards circumcising your young uncircumcised daughters?

a-positive ( )  b-negative ( )

30-If the answer in question (29) is negative, what are the reasons?

A-Health complications ( )  b-Uncircumcised are married ( )

c-Affects girls education ( )  d-Against religion ( )

e-Against dignity of women ( )  f-Other ( )

31- If the answer in question (29) is positive, what are the reasons?

a-Marriage prospect ( )  b-Social pressure ( )

c-cleanliness ( )  d-All of the above ( )

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Appendix No.(2) Arabic Questionnaire

جامعة الخرطوم
كلية الدراسات العليا
كلية الصحة العامة وصحة البيئة

استبانة لدراسة معرفة وتمارسة ومواعيد الإماثات تجاه خفاض الإناث - محلية أمبدة - منطقة البقعة 2010

التفاصيل:

1 - العمر / السنوات:

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<td>a-</td>
<td>15-25 سنة</td>
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<td>b-</td>
<td>26-35 سنة</td>
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<td>c-</td>
<td>36-45 سنة</td>
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<td>d-</td>
<td>أكثر من 45 سنة</td>
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2 - الدين:

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<td>مسيحية</td>
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<td>b-</td>
<td>تعتبر غير مسيحية</td>
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<td>c-</td>
<td>غير مسيحية</td>
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3 - الشمالي:

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<td>أمال</td>
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<td>b-</td>
<td>خالية</td>
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<td>c-</td>
<td>أساس</td>
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4 - المستوى التعليمي:

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<td>a-</td>
<td>لأساسية</td>
<td></td>
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<tr>
<td>b-</td>
<td>ثانوي عالي</td>
<td></td>
</tr>
<tr>
<td>c-</td>
<td>مستوى متوسط</td>
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</tr>
<tr>
<td>d-</td>
<td>مستوى أعلى</td>
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5 - الدخل الشهري:

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<tr>
<td>a-</td>
<td>أقل من 250 جنيه سوداني</td>
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<td>b-</td>
<td>251-350 جنيه سوداني</td>
<td></td>
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<tr>
<td>c-</td>
<td>أكثر من 350 جنيه سوداني</td>
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- المعرفة:
6- هل تعرفين خفاض الاناث؟

ا- نعم ( )
ب- لا ( )

7- إذا كانت الإجابة في السؤال (6) بنعم، ماهو خفاض الاناث؟

ا- إزالة جزئية للعضاء التناسلية الخارجية للأنثى ( )
ب- إزالة كاملة للعضاء التناسلية الخارجية للأنثى ( )
ج- كل ما ذكر ( )
د- آخرى ( )

8- إذا كانت الإجابة في السؤال (6) بنعم، ما هي انواعه؟

ا- نوع (1) السنة ( )
ب- نوع (2) المتوسط ( )
ج- نوع (3) قرعوني ( )
د- كل ما ذكر ( )

9- هل تعتقدين أن خفاض الاناث مضاعفات صحية؟

ا- نعم ( )
ب- لا ( )

10- إذا كانت الإجابة في السؤال (9) بنعم، ما هي المضاعفات الصحية لخفاض الاناث؟

ا- ارجاع في البول ( )
ب- انزيف ( )
ج- التهاب الجروح ( )
د- صدمة نفسية ( )
ه- تمزق في الأنسجة المحيطة ( )
ز- آخرى ( )

11- هل تعتقدين أنه يمكن استئصال خفاض الاناث؟

ا- نعم ( )
ب- لا ( )

12- إذا كانت الإجابة في السؤال (11) بنعم، ماهي أفضل طريقة لذلك؟

ا- التقويم الصحي ( )
ب- التعليم الدينية ( )
ج- القانون ( )
د- كل ما ذكر ( ) وآخرى ( )
ز- آخرى ( )
ج-الممارسة:

13- هل تمارسين خِفَاض الائب لبناتك؟
( ) ا-نعم ( ) ب-لا

14- إذا كانت الإجابة في السؤال (13) بنعم، وماهي الاسباب؟
( ) ب- لتجنب الوصمة الاجتماعية ( )
( ) ج- اسباب دينية ( ) د- اخرى

15- إذا كانت الإجابة في السؤال (13) بلاماهي الاسباب؟
( ) ب- ليس له اصل في الدين ( )
( ) ج- اخرى

16- من الذي يقوم بعملية الخفاض؟
( ) ب- مرَّضيَت ( ) ج- اخرى

17- في أي مكان تجري عملية الخفاض؟
( ) ب- بالمستشفى ( ) ج- العيادة ( ) د- اخرى

18- وماهي الأدوات المستخدمة في خفاض الائبات؟
( ) ب- فشارات حلاقة ( ) ج- مقصات ( ) د- اخرى

19- من الذي يقرر اجراء عملية الخفاض؟
( ) ب- افراد الاسرة ( )

المواقف:

20- ما هو موقفك تجاه خِفَاض الائبات؟
( ) ا-إيجابي ( ) ب- سلبي

21- إذا كانت الإجابة في السؤال (20) بالإيجاب، ما هي الاسباب؟
22- إذا كانت الإجابة في السؤال (20) بالنفي ما هي الأسباب؟

- المضاعفات الصحية ( )
- غير المخروقات يتزوجن أيضا ( )
- ي يؤثر على تعليم
- البحث ( )
- ضد الدين ( )
- ضد المرأة ( )
- ﺑ- الأخرى ( )

23- إذا كانت الإجابة في السؤال (20) بالإجاب يقل تفضيل نوعا معينا؟

- ﺑ- لا ( )
- ﺑ- ﻧ- ( )

24- إذا كانت الإجابة في السؤال (23) بنعم ما هو النوع الذي تفضل؟

- ﺑ- نوع (1) ﻣ- ( )
- ﺑ- نوع (2) ﻣ- ( )
- ﺑ- نوع (3) ﻣ- ( )
- ﺑ- الأخرى ( )

25- لماذا تفضل ذلك النوع؟

- ﺑ- لليس له مضاعفات صحية ( )
- ﺑ- ﺑ- اصل في الدين ( )
- ﺑ- ﺑ- أخرى ( )

26- ما هو موقفك تجاه مكافحة خفاض الأئتم؟

- ﺑ- إيجابي ( )
- ﺑ- سلبي ( )

27- إذا كانت الإجابة في السؤال (26) بالإيجاب ما هي الأسباب؟

- عادة ضارة ( )
- ليست له اصل في الدين ( )
- حديداً ( )
- ﺑ- أو ﺑ- معا ( )
- ﺑ- الأخرى ( )

28- إذا كانت الإجابة في السؤال (26) بالنفي ما هي الأسباب؟

- ﺑ- من أجل عفة البنت ( )
- ﺑ- لاسباب اجتماعية ( )
- ﺑ- في النظافة والجمال ( )
- ﺑ- دسابة دينية ( )
- ﺑ- الأخرى ( )

29- ما هو موقفك المستقبلي تجاه خفاض نباتك غير المخوضات؟
30- إذا كانت الإجابة في السؤال (29) بالنفي، ما هي الأسباب؟
أ- المضاعفات الصحية (  )
ب- غير المخوضات يتزوجن كذلك (  )
ج- يؤثر على تعليم البنات (  )
د- ضد العقيدة (  )
و- أخرى (  )

31- إذا كانت الإجابة في السؤال (29) بالإيجاب، ما هي الأسباب؟
أ- من منظور الزواج (  )
ب- الضغط الاجتماعي (  )
ج- النظافة (  )
د- كل ما سبق (  )
APPENDIX No(3)

Female Genital Mutilation/Cutting (FGM/C) PREVALENCE IN SUDAN

Source: Sudan Household Health Survey 2006
APPENDIX No.(4) Prevalence of Female Genital Mutilation in Africa

Prevalence of Female Genital Mutilation in Africa (darker shading denotes higher rates of FGM). Map adapted from data at State of Women in the World.

Source : UNICEF-2008