

**Assessment of Knowledge, Attitude and Practices regarding
Medication Abortion among Regular Undergraduate Female
Students in College of Social Sciences, Addis Ababa University**



Gizaw Thomas (BPharm)

Under the Supervision of Dr. Teferi Gedif

A Thesis Submitted to the Department of Pharmaceutics and Social Pharmacy

Presented in Partial Fulfillment of the Requirements for the Degree of
Master of Science in Pharmacoepidemiology and Social Pharmacy

Addis Ababa University

Addis Ababa, Ethiopia

April 2014

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

This is to certify that the thesis prepared by Gizaw Thomas, entitled: *Assessment of knowledge, Attitude and Practices among Regular Undergraduate Female Students in College of Social Sciences Addis Ababa University Regarding Medication Abortion* and submitted in partial fulfillment of the requirements for the Degree of Master of Science in Pharmacoepidemiology and Social Pharmacy complies with the regulations of the University and meets accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner: _____ Signature _____ Date _____

Examiner: _____ Signature _____ Date _____

Advisor: _____ Signature _____ Date _____

Chairman of Department

Abstract

Assessment of knowledge, attitude and practices regarding Medication Abortion among regular undergraduate female students in College of Social Sciences Addis Ababa University

Gizaw Thomas

Addis Ababa University, 2014

Unintended pregnancy is common and abortion rates are rising worldwide in general in Africa in particular and pose great challenge in achieving the MDGs. Safe abortion method especially MA related awareness and practices of females are known to have crucial contribution in the prevention and control of unsafe abortion and the resulting mortality and morbidity. The aim of this study was therefore to assess knowledge, attitude and practices regarding medication abortion among regular undergraduate female students of the CSSs, AAU. A cross-sectional quantitative study supplemented by key informants' interview was conducted between 1st of June to 5th of July 2013. The quantitative data were collected using structured, self-administered questionnaire and the qualitative data were collected by the PI using interview guide. The age of the study participants ranged from 18 to 25 years with a mean age of 20.6 ± 1.5 . Three-fourth of the respondents (159,74.6%) knew what MA meant where 11 (6.9%) and 97(61%) of them had high and low knowledge on MA respectively. Majority (142,66.7%) of the study participants would advise someone with unwanted pregnancy to undergo an abortion and 86 (40.4%) would consider abortion if they had unplanned pregnancy. From 21 respondents who had abortion experience, 13 (61.9%) used MA. The study revealed that majority of the female undergraduate students in the CSSs has low knowledge regarding MA, though most of them have positive attitude towards medication abortion. It would be much beneficial to female students if medication abortion awareness given by AAU in collaboration with DKT-Ethiopia, Ipas-Ethiopia, AACARHB and local mass media.

Key words: Abortion, Medication abortion, safe abortion, College of Social Sciences, Addis Ababa University, Undergraduate female Student

Acknowledgements

Above all, I should praise the almighty God, who gave me the courage and strength to accomplish the study with success.

I offer my sincerest gratitude to my advisor Dr Teferi Gedif for the invaluable comments, insights and guidance put in this thesis from title selection up to writing of the report.

My special thanks also goes to all data collectors, key informants and the study subjects who participated in the study.

I would also like to thank my fiancée Dr Molite Mesele for giving me support during the entire study period.

I would like to thank Ato Fitsum Sebsibe and Ato Dawit Teshome for their support starting from proposal writing to the final thesis writing. And I would like to offer my sincerest gratitude to W/ro Yewobdar Tilahun; this work would not have been possible without your help.

Finally, I would like to thank the School of Graduate Studies, Addis Ababa University for sponsoring the research and my family and friends for their enormous concern, moral support and encouragement throughout the study.

Table of Contents

Contents	Page
List of Acronyms.....	VIII
List of Figures.....	V
List of Tables	VI
1. Introduction	1
1.1. Background.....	1
1.2. Statement of the problem.....	4
2. Literature review	8
2.1. Overview of global abortion laws and practices	8
2.2. Ethiopian abortion law	10
2.3. Socio- Cultural context of abortion	11
2.4. Reasons for interfering with pregnancy	12
2.5. Women at risk of abortion	12
2.6. Acceptability of medication abortion.....	13
2.7. Barriers for safe abortion.....	13
2.8. The drug of choice for medication abortion	14
2.9. Studies on knowledge, attitude and practice on medication abortion	17
3. Objectives.....	19
3.1. General objective.....	19
3.2. Specific objectives.....	19
4. Methodology.....	20
4.1. Study setting and period.....	20
4.2. Study design.....	20
4.3. Source and study population.....	20
4.4. Sampling procedure.....	21
4.5. Variable of the study	21
4.6. Inclusion and Exclusion Criteria	21

4.7.Data collection and management	22
4.7.1. Data collectors.....	22
4.7.2. Data collection tools	22
4.7.3. Data quality control	22
4.8. Data analysis and interpretation	23
4.9. Operational definitions	23
4.10. Ethical considerations.....	24
5. Result	25
5.1. Socio-demographic characteristics of the study participants	25
5.2. Socio-demographic background of parents of the study participants	27
5.3. Respondents general knowledge on abortion	28
5.4. Respondents' general knowledge and attitude towards country's Abortion Law	30
5.5. Respondents knowledge on medication abortion	31
5.6. Respondents attitude towards abortion	34
5.7. Respondents sexual and medication abortion practice	35
5.8. Determinants of Knowledge and Practice towards medication abortion	36
5.9. Findings of key informant interviews	41
5.9.1. Findings of key informant interviews in the student clinic	41
5.9.2. Findings of key informant interviews from student based associations	43
6. Discussion	46
7. Conclusion	51
8. Recommendation	52
9. Reference	53
Annexes	60
I. Consent form/cover letter	60
II. KAP Questionnaire.....	61
III. Interview Guide/ English	71
IV. Interview Guide/ Amharic	73
V. Distribution of study participants in respective departments	76

List of Figures

Figure 1: A map showing world's abortion law	9
Figure 2: Abortion source of information by the study participants in College of Social Sciences, AAU, Addis Ababa, June 2013.....	29
Figure 3: Major source of information regarding medication abortion, College of Social Sciences, AAU, Addis Ababa, June 2013.	32
Figure 4: Institutions where Medication Abortion is performed, College of Social Sciences, AAU, Addis Ababa, June 2013.	33
Figure 5: Knowledge score on medication Abortion, College of Social Sciences, AAU, Addis Ababa, June 2013..	33

List of Tables

Table:-1. Advantages and disadvantage of Medication Abortion.....	16
Table 2: Socio-demographic characteristics of female undergraduate students, College of Social Sciences, AAU, Addis Ababa, June 2013	26
Table 3: Socio-demographic background of parents of female undergraduate students, College of Social Sciences, AAU, Addis Ababa, June 2013	27
Table 4: Knowledge of female undergraduate students regarding abortion, College of Social Sciences, AAU, Addis Ababa, June 2013	28
Table 5: Knowledge and attitude of female undergraduate students towards country's abortion law, College of Social Sciences, AAU, Addis Ababa, June 2013	30
Table 6: Knowledge of female undergraduate students regarding medication abortion, College of Social Sciences, AAU, Addis Ababa, June 2013.....	31
Table 7: Attitude of female undergraduate students towards abortion, College of Social Sciences, AAU, Addis Ababa, June 2013.....	34
Table 8: Sexual and abortion related practice of female undergraduate students, College of Social Sciences, AAU, Addis Ababa, June 2013.....	35
Table 9: Socio-demographic variables affecting medication abortion knowledge of female undergraduate students, College of Social Sciences, AAU, Addis Ababa, June 2013.	36

Table 10: Parental background characteristics influencing the medication abortion knowledge of female undergraduate students of College of Social Sciences in AAU, Addis Ababa, June 2013.....	38
Table 11: Predictors of medication abortion practice of female undergraduate students of College of Social Sciences in AAU, Addis Ababa, June 2013.....	39
Table 12: Predictors of family socio-demographic variables to medication abortion practice of female undergraduate students of College of Social Science in AAU, Addis Ababa, June 2013.....	40

List of Acronyms

AACARHB	Addis Ababa City Administration Health Bureau
AAU	Addis Ababa University
AOR	Adjusted Odds Ratio
COC	Combined Oral Contraceptives
CORHA	Consortium of Reproductive Health Associations
COR	Crude Odds Ratio
CSSs	College of Social Sciences
EDHS	Ethiopia Demographic and Health Survey
ICESCR	International Covenant on Economic, Social, and Cultural Rights
ICPD	International Conference on Population and Development
MA	Medical Abortion
MDGs	Millennium Development Goals
MMRatios	Maternal Mortality Ratios
MVA	Manual Vacuum Aspiration
PI	Principal Investigator
SOP	School of Pharmacy
UNFPA	United Nations population Fund Agency
WHO	World Health Organization

1. Introduction

1.1. Background

A large percentage of the products of the union of an egg and a sperm never become infants. If there is something seriously wrong with the fetus, the uterus often expels or aborts it. Abortion is a generic term for pregnancies that do not end in a live birth or a stillbirth. The word abortion originates from the Latin word, *aboriri* which means the failure to be born. Abortion can be defined as the termination of pregnancy, spontaneous, therapeutic or induced, before the fetus has become viable outside the uterus or before the fetus is capable to have a life outside of the womb. It is the premature expulsion from the uterus of the products of conception, which include the placenta, bag of waters, and fetus (Potts et al., 1977, WHO, 2004).

Spontaneous abortion refers to a natural biological process by which some pregnancies end and an induced abortion takes place when a pregnancy is terminated by the deliberate removal of the fetus from the uterus by the use of external methods as a result of an unwanted pregnancy (WHO, 2004). Elective abortion is the voluntary termination of pregnancy. Elective abortions may be performed surgically (e.g., by dilation and curettage (D&C)) or medically [e.g., by administration of medications such as mifepristone (also known as RU486 or mifeprex) and misoprostol]. A therapeutic abortion takes place when a pregnancy is terminated by the removal of the fetus from the uterus by the use of external methods, however, unlike an induced abortion that is performed as result of an unwanted pregnancy, therapeutic abortion is performed to either to save the life of a pregnant woman; or when a woman's physical or mental health is in jeopardy; or if a child would be born with a congenital disorder that may be terminal or related to significant illness; or to selectively decrease the number of fetuses to reduce health risks that are linked to multiple pregnancies (Ronco, 2013).

Legal abortions: This can be performed if the life of the woman will be jeopardized by the pregnancy. Unsafe abortions: This usually occurs where abortion is illegal. In some cases, women or adolescents may try to end their pregnancies by themselves or with the assistance of untrained personnel. WHO (2004) defines unsafe abortion as a procedure carried out by persons lacking the necessary skills or in an environment that does not conform to minimal standards or both. As many as 67,000 women in the world die annually as a result of unsafe abortion and 48% of all abortions worldwide are deemed unsafe (Leitner Center, 2010).

Unintended pregnancy poses a major challenge to reproductive health of young adults in developing countries. Some young women who had unintended pregnancies obtain abortion. Many of which are performed in unsafe condition and others carry their pregnancies to term, incurring the risk of morbidity and mortality higher than those for adult women. Unintended pregnancies is higher among women who were unmarried, lower economic status, at an early or late age of reproductive life, not using contraceptives consistently and attending formal education (Afable-Munsuz and Braveman, 2008).

Unintended pregnancy is common and abortion rates are rising worldwide. In 2008, 33 million (16%) of about 208 million pregnancies worldwide resulted in unintended births and 41 million (20%) in induced abortions (Glasiera et al., 2010). Be it induced, safe or unsafe, abortion is a universal phenomenon and has existed throughout history. Yet it continues to be a controversial issue, raising extreme passions among lay people, as well as politicians, religious leaders, and health and rights advocates (Shah and Åhman, 2009).

The right to health under the International Covenant on Economic, Social, and Cultural Rights (ICESCR) entitles women to available, accessible, and acceptable reproductive health care, including abortion care (Erdman et al., 2008). In June 2009, the UN Human Rights Council passed a landmark resolution recognizing preventable maternal mortality and morbidity as a pressing human-rights issue that violates a woman's rights to health, life, education, dignity, and information. Millennium Development Goal (MDG) 5 aims to reduce maternal mortality by three quarters by 2015 (Baggaley et al., 2010).

Every day 192 women die because of complications arising from unsafe abortion and nearly all of them occur in developing countries. These women are likely to have had little knowledge or no money to procure safe services; many of them are young, perhaps in their teens. Some of them have been raped, and some have experienced an accidental pregnancy due to failure of the contraceptive method they were using or the incorrect or inconsistent way they used it. Some of them lacked knowledge of methods to prevent unintended pregnancy or did not have the means to obtain them. Some may have found contraceptive services hard to reach, while others may have been turned away by judgmental or insensitive providers. A large percentage of them may have

first attempted to self-induce the abortion and failing that, they may have turned to an unskilled, but relatively inexpensive and affordable provider (Shah and Åhman, 2009).

Despite the magnitude of the problem of unsafe abortion, it is one of the most easily preventable causes of maternal death and ill health. Where abortion services are legal, safe, and accessible, complications of abortion are rare. In the United States, for example, where 22 percent of all pregnancies (excluding miscarriages) end in abortion, less than 0.3 percent of abortion patients experience a complication that requires hospitalization (Dabash and Fahimi, 2008).

Abortion is mainly performed whenever there are some compelling reasons to end a pregnancy. The death of women due to abortion related causes is unacceptable, since most of the causes are preventable. Inadequate delivery systems, restrictive abortion laws, negative cultural and religious attitudes and poor health infrastructure for the treatment of abortion related complications are the main burdens of women's health that could be prevented (Prata et al., 2010).

1.2. Statement of the Problem

More than 18 million young women give birth to a baby each year and 9 in 10 of them are in developing countries where about 30% women give birth to the first child before their 20th birthday. However, a large percentage of the unintended pregnancy results in unsafe abortion (Puri et al., 2007).

In Ethiopia, despite the technological advancements in modern contraception methods, unintended pregnancy is still a big problem. More than 60% of the pregnancies in adolescents are unintended; ones which result from contraception non-use, contraception method failure and rape. The incidence of unintended pregnancy and unsafe abortion, particularly among adolescents, remains high. Abortion emanating from unintended pregnancy is one of the most significant causes of maternal morbidity and mortality; it is also a major medical and public health problem (Tadese et al., 1994).

Low levels of contraceptive use lead to high levels of unintended pregnancy in Ethiopia, the root cause of abortion. In 2008, 101 unintended pregnancies occurred per 1,000 women aged 15–44, and 42% of all pregnancies were unintended. In the same year, an estimated 382,500 induced abortions were performed, for an annual rate of 23 abortions per 1,000 women aged 15–44 (Guttmacher, 2010).

According to WHO, an estimated one-fifth of pregnancies, 42 million out of 210 million, each year are voluntarily aborted. Of these, 22 million occur within a formal health care system and 20 million outside of the legal system (Dabash and Fahimi, 2008). Other studies on abortion also showed that the victims, with induced, are largely young, nulliparas, and single, relatively more educated, unemployed and students. More commonly affected groups are the young, schoolgirls, those with formal education, and not married (Lema et al., 1996).

Sub-Saharan Africa has the world's highest maternal mortality ratios (MMRatio). In this region, 3.9% of maternal deaths are due to induced abortion arising from an estimated 19 million unsafe abortions performed annually. Africa accounts for 25% of all illegal abortions performed worldwide and less than 1% of all legal abortions. Africa is also one of the most dangerous regions to have an abortion: the ratio of abortion deaths per 100,000 procedures is less than 1/100,000 in developed countries, 330/100,000 for developing countries and for Africa alone

averages 680/100,000 (Warriner, 2006). In Ethiopia, although the maternal mortality rate has been steadily declining over the years, the numbers are still significantly far from reaching the MDG 5 target (EDHS, 2011). In addition, unsafe abortion accounts for nearly 60% of all gynecologic admissions and almost 30% of all obstetric and gynecologic admissions in Ethiopia (Woldetsadik et al., 2011)

Complications of unsafe abortion are a major public health issue facing women in developing countries (Johnston, 2002) these include not only death but also countless acute and chronic injuries affecting women, their children, families, the communities they live in and cause economic loss to the whole society. Leading causes of death include hemorrhage, infection, and poisoning from substances used to induce abortion. Five million women are hospitalized each year for treatment of abortion related complications, such as hemorrhage and sepsis (Amissah, 2004, Singh, 2006).

The introduction of medication abortion (MA) has changed abortion practices dramatically in several countries. As the name indicates, MA consists of using drugs to terminate a pregnancy. Since the synthesis of prostaglandins in 1969 and antiprogesterone in the 1980s, mifepristone–misoprostol MA has provided an important alternative to surgical methods for elective termination of pregnancy. Medical abortion is especially promising for women most at risk of turning to dangerous or ineffective abortion methods, and for those for whom cost, distance or other factors make reaching other abortion services difficult or impossible. (Amissah, 2004). Since the 2008 introduction of medical abortion in Ethiopia, women’s use of this method has increased rapidly: More than half of women who seek early termination of pregnancy services in public facilities now choose medical abortion. And Ipas’s own site monitoring data found that between July 2011 and June 2012, 67 percent of all safe abortion procedures at Ipas-supported facilities were with medical abortion (Ipas-Ethiopia, 2013).

Given the choice, a majority of women choose medication rather than surgical abortion (Fiala and Danielsson, 2006). Although many different drugs have been used, alone and in combination, to induce abortion, a regimen composed of mifepristone plus misoprostol has been the one most widely used. WHO recommends this drug combination, with an initial dose of mifepristone followed by misoprostol 36 to 48 hours later, for early MA for first-trimester termination

(gestations up to 63 days since last menstrual period) (Ngo et al., 2012). In 2005, an estimated 26 million women worldwide used this drug combination to terminate their pregnancies (Ngo et al., 2011). This regimen results in $\geq 96\%$ complete abortion, and $\leq 1\%$ continuing pregnancy (Ngo et al., 2012).

Given increasing adolescent sexual activity and decreasing age at first sex in developing countries, the use of contraceptives to prevent unwanted pregnancies and unsafe abortion is especially important (Michael et al., 2003). Young adults terminate unplanned pregnancies for various reasons; these include fear of expulsion from school, unstable relationships, financial instability and lack of support from the partner. In cases where early marriage or single mothers are unaccepted, the pregnancy not only represents an unwanted responsibility but also the end of hope of further education, financial advancement and improved social opportunities in life (Olukoya, 2004).

Young women in the university environment are away from home for the first time and become free to experiment sex especially without any parental supervision. For the young females, there is usually associated coercion from older students and the liberal atmosphere of the university, which are factors that further encourage this experimentation. Coupled with their lack of, or poor knowledge of contraception, quite a few usually end up with unwanted pregnancies and are quite often faced with the predicament of dealing with the problem thereof (Cadmus and Owoaje, 2011).

Unintended pregnancy and early child bearing impacts negatively on the educational prospects of female students by forcing them to drop out of school (jeopardizing students' educational progress and future careers) because of the morbidity resulting from unsafe abortion when the pregnancy is unwanted Culminating in poor participation of female in the overall socio-economic development of their communities and eventually their countries (Fantahun et al., 1995).

University students are used for this sample because students often become agents of social change in society, and can serve as an indicator as to whether or not there will be a demand for medical abortion. Educated population often creates markets for new medical technologies to be introduced to a population or sub-population (Freire, 1996). In addition, studies have found that

for developing regions as a whole unsafe abortions peak among women aged 20-29 years old (Grimes et al., 2006; Shah and Ahman, 2004).

In Ethiopia there was no study conducted on the assessment of knowledge, attitude and practice medical method of abortion. For this reason, it is timely and important to assess knowledge, attitudes and practices among regular undergraduate female students in Addis Ababa University regarding MA. This study will assess the knowledge, attitude and practice of regular undergraduate female students in Addis Ababa University College of Social Sciences regarding MA.

2. Literature review

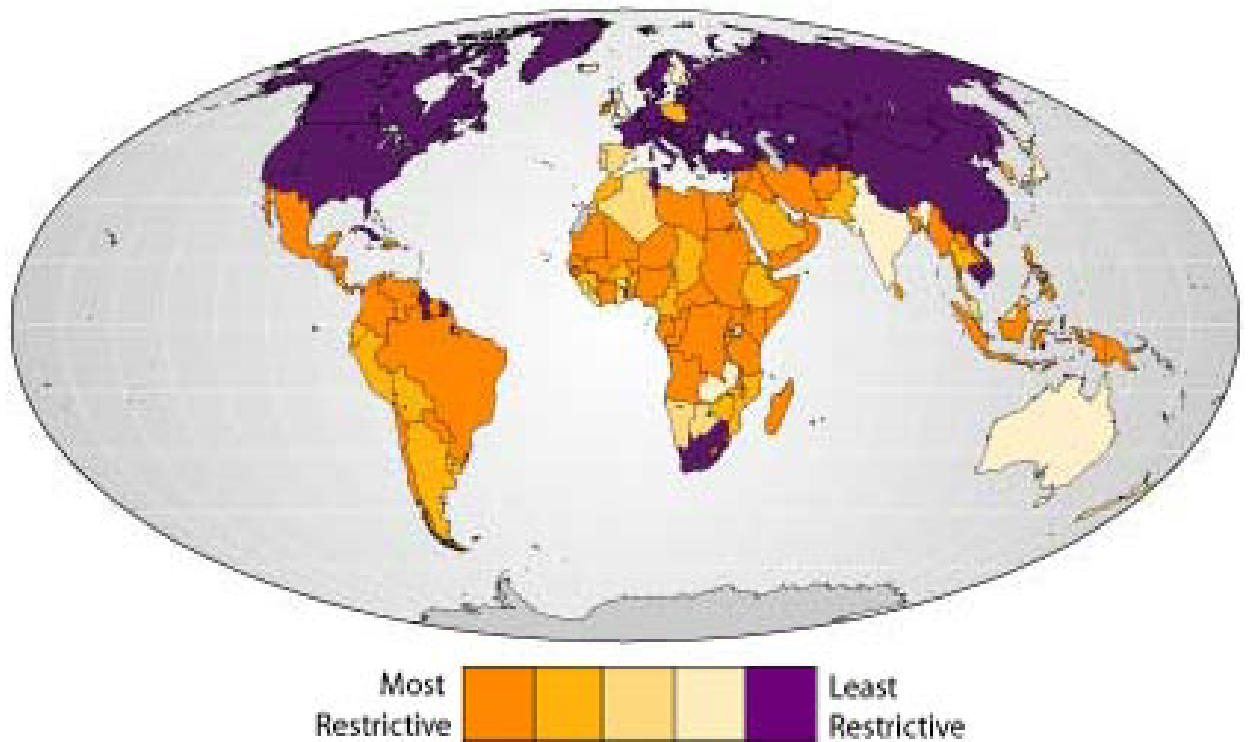
2.1. Overview of global abortion laws and practices

Based on WHO estimates of annual deaths due to unsafe abortion, more than three-quarters of a million women have died since 1994, when this issue was first placed on the world's agenda at the International Conference on Population and Development (ICPD). These problems require increased attention and new actions by policymakers responsible for progress toward the MDGs of reducing maternal mortality, promoting gender equality and empowering women, and eradicating poverty. Women's ability to regulate their own fertility is critical to the achievement of these internationally agreed goals. Conversely, the persistence of unsafe abortion in many countries is a key obstacle to meeting the MDGs (Crane and Smith, 2006).

Since the 1950s there has been a global trend towards the liberalization of abortion laws, with the focus moving away from abortion as a crime towards a concern for women's health and family well-being (Dixon, 2003). National laws and policies directly affect women's access to safe abortion. An estimated 61 percent of the world's population lives in countries where laws permit abortion with no restriction as to reason or on broad socioeconomic grounds, with an additional 3 percent in countries whose laws permit abortion on broad physical and mental health grounds. In contrast, 36% of the world's population lives in countries where laws permit abortion only to save the woman's life or to protect her physical health (Center for Reproductive Rights, 2005).

While most developed countries and a number of developing countries have relaxed restrictions, the legal status of abortion varies considerably throughout the world. Abortion laws tend to fall into one of the following categories (from the most to least restrictive) –prohibited totally or allowed only to save the woman's life (eg Mexico, Iran, Iraq, Nigeria); permitted to save the woman's life or protect her physical health (e.g. Poland, Saudi Arabia, Peru, Pakistan, Zimbabwe); permitted to save the woman's life or protect her physical or mental health (e.g. Ethiopia, Jamaica, Spain; Israel); permitted on all of the above grounds and also on socio-economic grounds (e.g. India; Japan, Taiwan, United Kingdom, Guyana after eight weeks, before which it is 'on request'); Permitted 'on request' (e.g. many European countries, Russian Federation, South Africa). (Dixon, 2003).

Figure 1: The World's Abortion Laws



Source: Center for Reproductive Rights 39 (Tautz, 2004)

In many countries, mortality and morbidity that resulted from abortion are declining due to the legalization of abortion and provision of accessible and affordable safe services. Legalization of abortion has an effect on reducing maternal mortality, although factors influencing maternal mortality vary between countries (Alemu, 2010).

2.2. Ethiopian abortion law

In Ethiopia, abortion has only recently been made liberal, under more particular circumstances. Prior to 2004, abortion was permitted in Ethiopia only to save a woman's life, protect her health, and in cases of rape. The 1957 Penal Code of Ethiopia had permitted abortion only to save the life or health of a woman. This restrictive penal code together with limited access to reproductive health services contributed to a high use of unsafe abortion services in the country. In order for a woman to have an abortion, visible signs of suffering were required. In addition, termination of pregnancy had to be diagnosed and certified in writing by a health care provider and two doctors had to authorize the procedure. Health care providers were subject to prosecution if they terminated a pregnancy based on false information provided by a woman (Goodman et. al. 2008).

In May 2005, Ethiopia's abortion law was amended to expand the exceptions within which a woman could legally seek an abortion. In a meeting with members of the CORHA, including Ethiopian Society of Obstetricians and Gynecologists, Ethiopian Public Health Association, Engender Health, and Ipas, members explained how the high incidence of deaths as a result of unsafe abortion in the country led the government to make the change (Center for Health and Gender Equity, 2010). According to the new law a woman can legally terminate a pregnancy under the following circumstances: When pregnancy results from rape or incest, when the health or life of the woman and the fetus are in danger, in cases of fetal abnormalities, for women with physical or mental disabilities and for minors who are physically or psychologically unprepared to raise a child. According to the law, no consent from a spouse, partner or parent is required to obtain a legal abortion and no requirements exist for legal reporting or documenting rape or incest as a prerequisite for obtaining a legal abortion (Woldetsadik et al., 2011).

In 2006, the Ethiopian MoH has published an official interpretation of the changes in the abortion law and guidelines for the implementation of safe abortion services in Ethiopia. Three aspects of these guidelines are important steps forward for abortion provision. First, abortion is allowed up to twenty eight weeks of pregnancy and doctors are empowered to offer abortion services to any woman whose health or life is threatened. Second, the abortion methods recommended are MA and MVA for pregnancies until twelve weeks. Dilatation and curettage is not recommended, and is only suggested as a final option if MVA not available. Third, abortion services during the first trimester can be provided by trained nurses and midwives, as well as by doctors (FMOH, 2006).

2.3. Socio- cultural context of abortion

Most studies conducted on abortion have failed to explain the socio-cultural and economic situations of the women who undertake the procedure. Although the existence of abortion all over the world and its biomedical and public health perspectives are documented, women's opinions, perceptions and experiences of abortion are scarcely analyzed. Even in studies that do pay attention to the context of women who have abortions, the feelings and decision-making processes experienced by women intending to abort an unwanted pregnancy are not fully explored (Shah and Åhman, 2009).

Many young women in developing countries prefer to undertake unsafe abortion by untrained providers or by using different dangerous self inducement methods which put them in a high risk of death. This is mainly because of various factors such as legal barriers, social stigma and economic reasons. In many societies, pregnancy in unmarried young girls is socially condemned. For example, in Vietnam, despite the relatively easy accessibility of abortion services, young women and men experienced stigma and expressed feelings of regret, believing that they had committed a sinful and immoral act which is resulted from their family and religious perception about abortion. These feelings led them to keep their abortion as a secret (Tine, 2002).

In most of the developing countries, societies, parents and teachers do not clearly provide information for adolescents about sexuality and reproductive health. Thus, adolescents are shy and afraid of discussing about contraceptives with elders as a result they are exposed to unintended pregnancy. Moreover, most of unmarried girls want abortion in secret and within short time as abortion is immoral in many societies (Olukoya et.al. 2001).

In the Ethiopian context, factors associated with culture, diverse religious opinions, and views on women's rights to control over their own lives and bodies and the right of the fetus to life highly affects the positions on abortion issue (Ashenafi, 2004). In Ethiopia women occupied the lower socio-economic status and hence marginalized from making decisions at all levels. They are deprived from basic human rights such as access to reproductive resources, education and training, basic health services, and employment. Furthermore, women are suffering from sexual abuse, rape, marriage by abduction, early marriage, widow inheritance, under the pretext of tradition and culture. Sexual harassment and intimidation at work places, schools and other places

are common forms of violence faced by women. In addition, they impose on themselves in an effort to act in accordance with culture and/or tradition (NCTPE, 2003).

2.4. Reasons for interfering with pregnancy

The majorities of women opting for an induced abortion are married or live in a stable union and have several children. Unwanted pregnancy may occur for various reasons: Millions of women and men either do not have access to appropriate contraceptive methods. UNFPA estimated 350 million couples worldwide to have insufficient access to modern methods of contraception; No contraceptive method is 100 percent effective. Even if all contraceptive users were to use methods perfectly all the time, there would still be nearly six million accidental pregnancies annually. Thus, even with high rates of contraceptive use, unwanted pregnancies will occur which women may seek to end by induced abortion; Many people do not have adequate information and support to use contraceptives effectively or do not always manage to use them perfectly. Unwanted pregnancy caused through rape is a particular concern in conflict and refugee situations; Cultural reasons: In societies where a woman's value is much defined over her fertility, an ambiguous attitude towards pregnancy and contraception often among young married women and even adolescents is found. Moreover, women are often in a position, where they can hardly resist sexual expectations of men, including their partners, and sexual harassment from men whom they are all too often dependent on (Tautz, 2004).

According to a study on strategic assessment of unsafe abortion in Malawi most of the reasons given by women during abortion were: poverty and inability to support children, desire to remain in school, extra-marital pregnancy, partner insistence, parental insistence, pregnancy resulting from prostitution, pregnancy too close to previous pregnancy, pregnancy resulting from rape or incest, abusive relationship, pregnancy resulting from traditional sexual practices, avoid expulsion from church, restriction in maternity leave policy, restriction in private medical insurance and restrictions in work-related pregnancy benefits (Jackson et al., 2011).

2.5. Women at risk of abortion

Every woman in reproductive age carries the risk of an unwanted pregnancy. There is no typical profile of women with an unwanted pregnancy regarding age, parity, socio-economic background, educational status, type of current union, even not the state of knowledge on contraception. There are, however, women who are particularly at risk of an unsafe abortion: Young and/or unmarried women; Women in crises, conflict and refugee situations; Women exposed to sexual violence and Poor women (WHO, 1998).

2.6. Acceptability of medication abortion

It is an undeniable fact that abortion, both safe and unsafe, has always occurred and will continue to occur in every culture and society. It is inevitable that women will continue to experience unwanted pregnancies for widely varying reasons, including lack of birth control services, contraceptive failure and sexual assault. In response, we must aim to address all facets of the problem, from the provision of contraceptive services to preventing unwanted pregnancy, through the provision of high quality abortion care within the legal indications of individual nations and post-abortion care for unsafely procured abortions (Amissah, 2004).

2.7. Barriers for safe abortion

While the last 30 years have seen a global trend toward liberalization of national abortion laws, many governments around the world continue to impose legal barriers to abortion services. These barriers often take the form of criminal laws that punish both providers of abortion and those who undergo the procedure. Even in contexts where laws regulating abortion are liberal, lack of clarity in the law, an absence of public funding for abortion, burdensome procedural barriers to abortion services, and providers' refusals to offer legal abortions may effectively deny women access to safe abortion services. In addition, as new technologies for abortion service delivery emerge, most governments have been slow to enable women to take advantage of them.

Slightly more than 6 in 10 (62%) women and 18% of men age 25-49 were sexually active by the age of 18. Twenty-nine percent of women had begun having sex by the age of 15. Women start sexual activity about four and a half years earlier than men (median age of 16.6 years for women and 21.2 years for men) (EDHS, 2011).

2.8.The drug of choice for medication abortion

For many years termination of early pregnancy has been done surgically using MVA but now agents are available which can terminate pregnancy if taken orally/ vaginally or parentally obviating the need for the surgical procedures thus reducing the complications of the procedure (Kapur et al., 2006). MAs using drugs has recently come into focus as a plausible alternative to MVA to induce abortion (Adinma et al., 2012).

The term medication abortion refers to the termination of pregnancy using medications instead of surgical intervention. Medications employed for MA include mifepristone, misoprostol and methotrexate (Adinma et al., 2012). Antiprogestone drugs such as mifepristone (RU 486), prostaglandins like misoprostol have been approved by the United States Food & Drug Administration for termination of pregnancy. Anti-mitotic drugs such as methotrexate have also been used for pregnancy termination (Kapur et al., 2006). MA is noninvasive, and the facilities and skills it requires are less specialized than those for surgical abortion; it can thus be delivered by a larger set of providers in a broader range of facilities (Erdman et al., 2008).

Early MA is a highly acceptable method of abortion where following pregnancy diagnosis and accurate gestational dating; women undergoing MA first receive either mifepristone or methotrexate in a health facility and self-administer a different drug, misoprostol, at home after a set interval. Mifepristone interferes with the continuation of pregnancy. Misoprostol expels the products of conception from the uterus. MA occurs as a process over an extended period rather than as a discrete surgical event. A follow-up visit to the health facility is therefore required to confirm a complete abortion by serum hCG measurement or ultrasound or to complete the abortion by surgical evacuation if necessary (Erdman et al., 2008).

Mifepristone was developed in France in the 1970s. It is an anti-progestin and blocks the action of progesterone, which is necessary to establish and maintain placental attachment (UCSF, 2001).The first clinical study of mifepristone as an abortifacient was in Geneva in 1981 and by 1985 its improved efficacy when combined with a prostaglandin analogue was reported. France became the first country outside to license the use of mifepristone in combination with a prostaglandin analogue for MA, in 1988 (Adinma et al., 2012).

Ideally, any method of MA should have an overall efficacy comparable to that of vacuum aspiration, i.e. a rate of complete abortion of more than 95% and an ongoing pregnancy rate of less than 1%. Desirable characteristics of a method of MA for the early first trimester are: effective up to 63 days of gestation; easy to administer; safe, and have acceptable side-effects; affordable; widely available and blood loss should be similar to, or less than, that associated with vacuum aspiration. The only regimen that meets the efficacy criteria is a combination of mifepristone and a prostaglandin – either misoprostol or gemeprost. Use of mifepristone or a prostaglandin alone does not meet them. Use of methotrexate in combination with prostaglandin can approach the required efficacy, but is not recommended because it is teratogenic (WHO, 2006).

- **Safety of medication abortion**

As with all clinical procedures there is a small risk of complications following any method of abortion. Damage to the cervix, will be much rarer in early MA compared with surgical abortion: Excessive bleeding happens in around 1 in every 1,000 abortions; Damage to the cervix happens in no more than 10 in every 1,000 abortions; Up to 1 in 10 women will get an infection after an abortion; 1 in every 100 abortions the womb is not completely emptied of its contents and the woman may need further treatment; 1 to 14 out of every 1,000 MAs fail to end the pregnancy (Ipas). Medication abortion appears to have no long-term adverse health effects. In addition to the expected effects of vaginal bleeding and cramping, the most common side effects reported after use of the mifepristone and misoprostol regimen are: nausea (36% to 67%), diarrhea (8% to 23%), headache (13% to 32%), dizziness (12% to 37%), vomiting (13% to 34%) and fever or chills (4% to 37%) ((UCSF, 2001)

- **Contraindication to medication abortion**

There are a number of pre-existing conditions that exclude women from having an early MA procedure. These include: Cardiovascular disease, i.e. cerebro-vascular, ischemic heart or peripheral vascular disease; Coagulation disorder; Chronic adrenal failure; Severe asthma not controlled by therapy - eg waking at night with breathlessness, breathlessness at rest, recent hospital admission for asthma; Porphyria; Suspected extra uterine pregnancy; Known adverse drug reaction to mifepristone or prostaglandins (bpas)

Table:-1. Advantages and disadvantage of medication abortion

Advantage	Disadvantage
<ul style="list-style-type: none">• Non-invasive• Patient autonomy: the patient feels more in control, and the process is less frightening• Private• Inexpensive• Technically simple• Office procedure• Immediate application possible• Alternative for failed surgical abortion, particularly if the problem involved difficulty accessing the uterus because of uterine leiomyoma or a congenital anomaly	<ul style="list-style-type: none">• Commitment to follow-up by patient and physician• Longer interval from start to finish• Gastrointestinal (GI) upset associated with the medications• Up to 10% may have a delayed evacuation of POC for several days to weeks• Heavy bleeding and cramps can occur when POC are passed, and the woman should be aware that she would experience this at home• Failed termination, defined as the need for a surgical evacuation, can occur in up to 5% of patient

Source (Davis, 2006)

2.9. Studies on knowledge, attitude and practice on medication abortion

A study done on knowledge of MA among Brazilian medical students in Brazil where all students (1260) from three medical schools of the state of São Paulo were invited to participate in a survey where 874 completed the questionnaire, yielding a response rate of 69%. Although all students in their final year of medical school had heard of misoprostol for termination of pregnancy, and 88% reported having heard how to use it, only 8% showed satisfactory knowledge of its use and effects. The percentages of students who had heard about misoprostol as a means to induce abortion and about how to use it for abortion were 72% and 52% respectively. Of the students aged 25 years or older, 91% had heard of misoprostol as a means to induce abortion but only 40% of those younger than 20 years had heard of misoprostol as a means to induce abortion. Over one-third of first-year students, more than 50% of second-year students, 90% of fourth-year students, and all students in their final year had heard about misoprostol for inducing abortion. In contrast, the proportion who had heard of mifepristone for abortion was very low, rising from just over 1% among first-year students to about 8% among those in their final year (Fernandes et al., 2012).

A cross-sectional survey of a representative sample of female students of childbearing age living in halls of residence, on the resolution of unintended pregnancy at the University of Ghana showed that only 42 female students had ever heard about Misoprostol/Cytotec. Four students knew it was a tablet but did not know what it was meant for and another 2 admitted that it was an ulcer drug. The others knew about the effects of the drug on the reproductive system (i.e., a drug to regulate menstrual flow – 2 students, to induce labor – 3 students and to terminate pregnancy – 29 students). Of the 42 students, 33 knew a pharmacy and 4 knew a hospital where they could obtain Misoprostol (El-Adas, 2007).

A study conducted on knowledge and practices among medical abortion seekers in southeastern Nigeria where a descriptive, cross sectional survey of 100 was conducted on consecutive medical abortion seekers. Fifty-five percent of respondents were students where sixty-four percent had a secondary educational level, 33% had a tertiary education level and 3% had a primary educational level. Fifty-eight percent of subjects were aged 18-20 years; 25% had one or more previous deliveries and 49% had a previous termination of pregnancy. Forty-eight percent of the respondents had used drugs for pregnancy terminations. The frequently used drugs for termination included quinine combined with other drugs in 8%; gynaecosid alone in 6%, gynaecosid

combined with other drugs in 6%, menstrogen combined with other drugs in 6% and an unclassified drug in 14%. Thirty-three percent of subjects purchased their abortion drugs in a pharmacy. Three percent, 2%, and 0% of subjects had knowledge of misoprostol, mifepristone and methotrexate, respectively. One percent of respondents had used misoprostol (Adinma et al., 2012).

A study done in Nigeria on knowledge about complications and practice of abortion among female undergraduates in the university of Ibadan, A total of 425 students were interviewed, The mean age of the respondents was 21.5 ± 2.8 years with a range of 15-30 years. The majority, 414 (97.4%) were single, 242 (56.9%) were aged between 20-24 years and about a third 150 (35.2%) were in the first year of study. Overall, 122 (29%) of the respondents had ever had sexual intercourse. Twenty five percent of those who were sexually active had ever been pregnant and 90% had terminated the pregnancy. The most common reason given for termination was that pregnancy was unplanned. Most of the respondents 354 (83.3%) had a good knowledge about complications of abortion and mean knowledge score was 4.01 ± 1.58 (range 0-5) (Cadmus and Owoaje, 2011).

3. Objectives

3.1. General objective

To assess knowledge, attitude and practices regarding medication abortion among female regular undergraduate students of the College of Social Sciences in Addis Ababa University.

3.2. Specific objectives

- To determine level of knowledge on medication abortion.
- To assess attitude towards medication abortion.
- To assess the practice on medication abortion.
- To identify determinants that affect knowledge, attitudes and practices related to MA.

4. Methodology

4.1. Study setting and period

This study was conducted in AAU which is located in Addis Ababa, the nation's capital and seat for African Union and many other regional and international organizations. AAU is the first and the largest public higher education institution in Ethiopia. AAU formerly called Haile Selassie I University. It was originally named "University College of Addis Ababa" at its founding, then renamed after the Ethiopian emperor Haile Selassie I in 1962, before receiving its current name in 1975. It has fourteen campuses; 13 in Addis Ababa and one in Bishoftu, school of veterinary medicine, about 45 kilometers away. Currently it runs bachelors, medical doctorates, postgraduates and certificates of specialty programs. According to the data obtained from the registrar at the university, in 2012/13, 4561 male and 1462 female students were enrolled in different regular undergraduate programs. The total population of male and female regular undergraduate students in the year 2012/13 in all campuses was 16,212 and 5180, respectively. During the study period, there were about 60 departments at different faculties, schools, and colleges. At the level of undergraduate program, regular students live within campus away from family with peer groups and outside the campus with their families, husbands and friends. These students are gathered from all regions of the country with cultural and language diversity. The Social Sciences College has eight departments namely, Archeology, Geography and Environmental science, History, Philosophy, Political science and International relations, Social Anthropology, Sociology and school of Social Work (aau.edu.et and registrar). The study was conducted between 1st of June to 5th of July, 2013.

4.2. Study design

A cross-sectional quantitative study was conducted to assess knowledge, attitudes and practices regarding MA among regular undergraduate female students in the college of Social Science in AAU, and a key informant interview of the head of the student clinic, student counsel, girls club and female student office, was conducted to address the different problems regular undergraduate female students encounter in general and reproductive health problems in particular.

4.3. Source and study population

The source and study populations were all regular undergraduate female students of college of social science who were attending classes during the data collection period.

4.4. Sampling procedure

According to the AAU registrar, since the number of departments in the Social Sciences College was only eight (8) and the number of undergraduate female students in the respective department were only 247 it became convenient and feasible to include all departments in the study (Archeology, Geography and environmental science, History, Philosophy, Political science and International relations, Social Anthropology, Sociology and school of Social Work).

4.5. Variables of the study

✓ **Assessment of knowledge on medication abortion**

- Independent Variables

Socio-demographic variables including age, educational status, residence, religion, marital status, parental educational status

- Dependent Variables

Knowledge on MA

✓ **Assessment of attitude towards medication abortion**

- Independent Variables

Socio-demographic variables, parental educational status and knowledge on MA

- Dependent Variables

Attitude towards MA

✓ **practice of regular undergraduate female students towards medication abortion**

- Independent Variables

Socio-demographic variables, parental educational status and knowledge towards MA

- Dependent Variables

Practices on MA

4.6. Inclusion and exclusion criteria

- Inclusion Criteria includes;
 - All regular undergraduate female students of college of social science in AAU
- Exclusion Criteria includes;

- Those students from other colleges
- Those students from CSS unable to see because of injury, disease, or a congenital condition
- Postgraduate students

4.7.Data collection and management

4.7.1. Data collectors

Eight third year female nursing students from AAU College of Health Sciences were recruited as data collectors for quantitative survey. Training as to how to use the instruments was provided to them before the start of data collection process. Supervision and spot checking was made by the principal investigator during the data collection process and any inconsistencies were amended on time.

Key informant interviews with the Head of the Students' Clinic, Student Counselor, Girls club and from female student office were conducted by the principal investigator.

4.7.2. Data collection tools

For quantitative data collection a pretested, structured, self-administered questionnaire consisting of items with pre-coded response categories was used. The questionnaire included questions on the general socio-demographic characteristics of respondents, their knowledge, attitude and practice towards MA. And semi-structured face to face interview guide was developed to collect information about the reproductive health problems that the undergraduate female students face in the campus from key informants. Recording and note taking was employed after permission was granted from each key informant.

4.7.3. Data quality control

In order to check the practicability of the proposed study, pretest of the data collection instrument (the questionnaires) and interview guide was performed a week before the actual data collection process and important modification was made accordingly. For testing the questionnaires 10% of the total sample (247) was used in FBE campus.

Some of the changes made to the questionnaire were: What does MA mean? Question was added with options to select for those who answered "Yes" to question "Do you know what medication

abortion means”. The response options teacher and conference, traditional herbal healers, I don’t know, abortion by abortion pill from health facility were added for questions 016,026, 017 and 027 and 035 respectively since it was found to have a higher frequency of response in the “others” category.

4.8. Data analysis and interpretation

After the data collection from sample population, the quantitative data was entered using SPSS version 16.0. The data was coded, entered, cleaned and data clean up was performed by running frequencies. Proportions, percentages, mean, standard deviation was used to describe quantitative data. Tables and graphs were used to present findings. Bar and pie graphs was created using Microsoft Excel sheet. Associations were conducted using odds ratio (OR). Logistic regression was employed to adjust for possible confounding variables. For the qualitative data manual analysis was used based on the recording and notes taken during the study time. Transcription, translation, coding of important phrases of the respondent own words; summary of data using summary sheet and categorizing of similar themes were done. In the questionnaire, there were five questions aimed to assess MA related knowledge of the respondents. Each right response was given a score of 1; while a wrong response was scored 0. Respondents were categorized based on their overall knowledge scores.

4.9. Operational definitions

- Medication abortion is a method of pharmacologic termination of the early first trimester of pregnancy. Depending on the agent(s), the regimen, and the provider, MA may be initiated as soon as a woman finds out she is pregnant, through 7–9 weeks (49–63 days) of gestation (via menstrual dating).
- **Knowledge:** what a woman knows about MA (Meaning, place where it is done, drugs used for MA and gestational age MA is used).

Low knowledge: a score of 0 to 2 on the knowledge part of the assessment

Satisfactory knowledge: a score of 3 on the knowledge part of the assessment

High knowledge: a score of greater than or equal to 4 on the knowledge part of the assessment (Fernandes et al., 2012)

- **Attitude:** the predisposition to respond in a favorable or unfavorable manner towards abortion, MA and related issues such as advising colleague to have abortion or for oneself in case of unplanned pregnancy, which type of abortion is preferable.
- **Practice:** is the overt health behavior, habit or customs of a woman related to MA. Those who have experienced/ practiced MA.

4.10. Ethical considerations

Ethical approval was obtained from the Ethics Review Committee of the School of Pharmacy, AAU. A letter of cooperation was written from the Department of Pharmaceutics and Social Pharmacy to College of Social Sciences and other relevant units of University at Sidist Kilo campus. Individual consent was obtained before the questionnaire was delivered to the participants. During the consent process, they were provided with information regarding the purpose of the study, why and how they were selected for this study and opportunity was given to ask questions if they had. Participants were also assured about confidentiality of the information obtained from them during the data collection by not using personal identifiers and analyzing the data in aggregates.

5. Results

A total of 222 female participated in the study. Nine filled questionnaires were discarded due to incompleteness resulting in a response rate of 86.23%.

5.1 Socio-demographic characteristics of the study participants

The age of the study participants ranged from 18 to 25 years with a mean age of 20.6 ± 1.5 . The age groups 18-20 (51.2%) constituted the largest proportions of the study participants. Among the 213 respondents, about two-third 140 (65.7%) were from Addis Ababa City Administration. The majority of the study participants 143 (67.1%) were orthodox Christians. From the total of 213 participant; 58 (27.2%), 78 (36.6%), 58 (27.2%) and 19(8.9%) were 1st year, 2nd year, 3rd year and 4th year students, respectively. Only 7 (3.3%) of the study participants were married, while the majority which account 120 (56.3%) were single without relationship, and rest 86 (40.4%) were single with relationship. Majority of the respondents, 131(61.5%) live outside the campus where most of them 117(89.3%) live with their family (Table 1).

Table 2: Socio-demographic characteristics of undergraduate female students, College of Social Sciences, AAU, Addis Ababa, June 2013

Characteristics	Frequency	Percentage
Age distribution (n=213)		
18-20	109	51.2
21-23	97	45.5
≥24	7	3.3
	Mean(SD)	20.6(1.5)
	Range	25-18(7)
Region they come from (n=213)		
Dredawa city Administration	4	1.9
Oromiya	21	9.9
SNNPR	25	11.7
Tigray	5	2.3
Amhara	16	7.5
Addis Ababa city Administration	140	65.7
Benshangulgumuz	2	0.9
Religion (n=213)		
Orthodox	143	67.1
Muslim	12	5.6
Catholic	6	2.8
Protestant	49	23
Others*	3	1.4
Department of study (n=213)		
Archeology	12	5.6
Geography and environmental science	13	6.1
History	4	1.9
Philosophy	8	3.8
Political science and International	41	19.2
Social Anthropology	38	17.8
Sociology	53	24.9
Social Work	44	20.7
Year of study (n=213)		
Year I	58	27.2
Year II	78	36.6
Year III	58	27.2
Year IV	19	8.9
Marital status (n=213)		
Married	7	3.3
single without relationship	120	56.3
single with relationship	86	40.4
Place of residence (n=213)		
In the campus Dormitory	82	38.5
Outside the campus	131	61.5
Outside the campus Living with (n=131)		
With my family	117	89.3
With my relatives	5	3.8

With my husband	6	4.6
With my friends	1	0.8
Alone	2	1.5

* Appostolic, Lutheran,

5.2. Socio-demographic background of parents of the study participants

Sixteen (7.5%) of the study participants had illiterate mother, 41 (19.2%) with primary education, 44 (20.7) had secondary education and 112 (52.6%) had some forms of college education. Seventy three mothers of the study participants were reported to be government employee, 67 (31.5%) housewives and 34 (16%) merchants.

Table 3: Socio-demographic background of parents of undergraduate female students, College of Social sciences, AAU, Addis Ababa, June 2013

Characteristics	Frequency	Percentage
Mother Educational background (n=213)		
Illiterate	16	7.5
Primary education	41	19.2
Secondary education	44	20.7
Above secondary school	112	52.6
Mother occupation (n=213)		
Housewife	67	31.5
Government employee	73	34.3
Private employee	7	3.3
Merchant	34	16.0
self business	9	4.2
Other*	23	10.7
Father Educational background (n=213)		
Illiterate	9	4.2
Primary education	26	12.2
Secondary education	30	14.1
Above secondary school	148	69.5
Father occupation (n=213)		
Government employee	96	45.1
Merchant	58	27.2
Retired	20	9.4
self business	18	8.4
Others **	21	9.9
Medical related profession in family (n=213)		
Yes	46	21.6

* Day laborer, Housemaid, Jobless and Retired, ** day laborers, private employee and evangelic (pastor), farmer, dead

On the other hand only 9 (4.2%) of the fathers' of the study participants were reported to be illiterate, whereas more than two-third of them, 148 (69.5%), had some forms of college education. Regarding fathers' occupation, 96 (45.1%) were government employee, 58 (27.2%) were merchants, 20 (9.4%) were retired and 18 (8.4%) were with some forms of own business activities. Forty six (21.6%) of the study participants parents reported to have medical related profession (Table 2).

5.3. Respondents general knowledge on abortion

When asked about the possible outcomes of pregnancy the majority of the respondents responded as giving birth 203(95.8%) and 74 (34.9%) said abortion.

Table 4: Respondents knowledge regarding abortion, College of Social Sciences, AAU, Addis Ababa, June 2013.

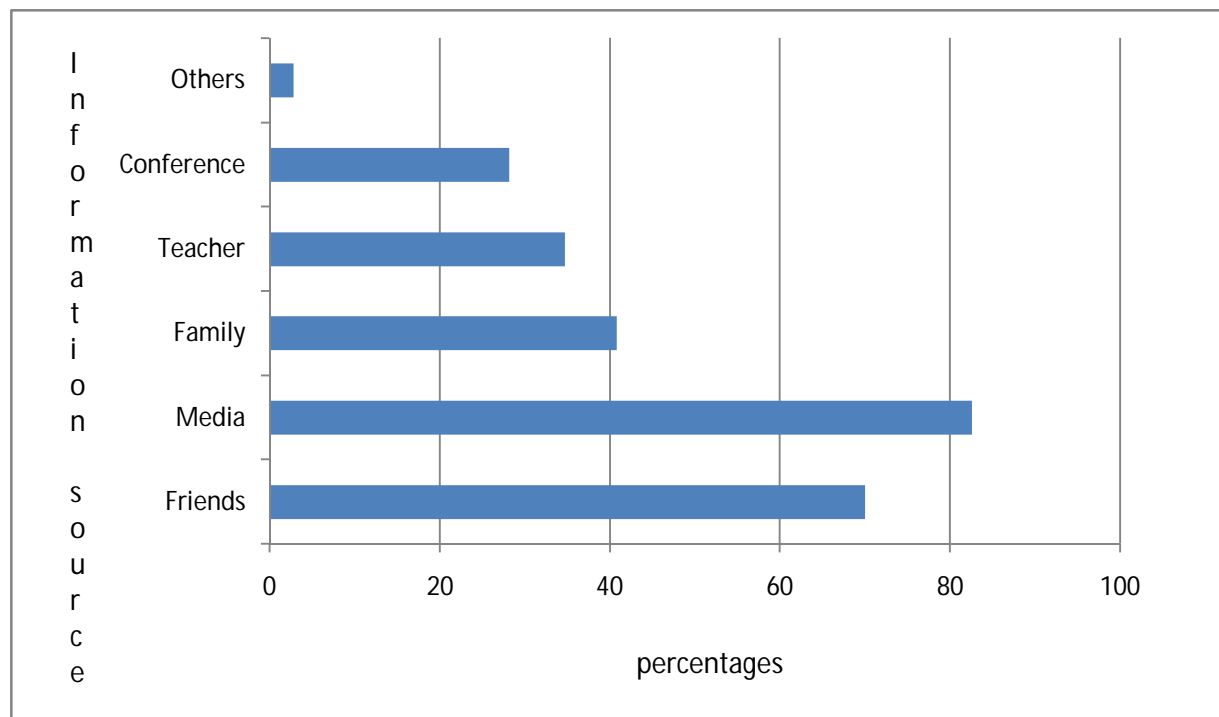
Question	Frequency	Percentage
What is the possible outcome of pregnancy?		
Giving Birth	203	95.8
Abortion	74	34.9
Other*	2	0.9
Have you ever heard about abortion?		
Yes	213	100
Which ways of performing abortion do you know?		
Abortion by Surgical procedures	118	55.7
Abortion by medication /drugs	167	78.8
Abortion by traditional practitioners	140	66.0
I do not Know	10	4.7
Others **	1	0.5
Do you know what safe abortion means? (n=213)		
Yes	169	79.3
Safe abortion means? When performed		
By qualified persons	141	83.4
By using correct techniques	103	60.9
In sanitary condition	59	34.9
By untrained persons	6	3.6
Do you know what unsafe abortion means? (n=213)		
Yes	194	91.1
Unsafe Abortion Means? When performed		
By persons lacking the necessary skills	156	80.0
In an environment lacking minimal medical standards	120	61.5
By the woman herself	93	47.7
By health worker under unhygienic condition	74	37.9

Others * miscarriage and maternal death: Others** by drinking high amount of alcohol.

NB: For multiple responses the sum of the percentage may add up more than 100.

The entire study participants heard about abortion. The ways of performing abortion that the majority of respondents knew was: abortion by medication /drugs 167(78.8%), by traditional practitioners 140(66.0%), by Surgical procedures 118(55.7%) and 10 (4.7%) of the respondents didn't have idea as to how pregnancy would be terminated. 169 (79.3%) of the study participants knew what safe abortion means and majority of the respondents 194(91.1%) knew what an unsafe abortion means. (Table3).

The majority of the respondents 179(82.6%) mentioned media (television, radio and newspaper) as the information source for abortion followed by friends 149(70.0%), family 87(40.8%), teacher 74(34.7), and conference 60(28.2) (Fig1).



Others= Books, Films, discussions, church meetings and formal education

Figure 2: Abortion source of information by the study participants in College of Social Sciences, AAU, Addis Ababa, June 2013.

5.4. Respondents general Knowledge and attitude towards country's abortion law

Nearly half of the respondents, 100 (46.9%), believe abortion is legally allowed in Ethiopia while 60 (28.2%) believe abortion is not legally allowed in Ethiopia. Among those respondents who believe abortion is legally allowed in Ethiopia (n=100), most of the respondents mentioned conditions as when the pregnancy is resulted from rape or incest 87(87.0%) followed by When the woman or fetus lives are threatened 69(69.0%) and 7 (7%) of them responded on request from everyone. More than half of the study participants, 116 (54.5%) support government allowing abortion in this country.

Table 5: Knowledge and attitude towards country's abortion law, College of Social Sciences, AAU, Addis Ababa, June 2013

Question	Frequency	Percentage
Is abortion legally allowed in Ethiopia? (n=213)		
Yes	100	46.9
No	60	28.2
I do not know	53	24.9
In what conditions abortion allowed in Ethiopia? (n=100)		
When the pregnancy is resulted from rape or incest	87	87.0
When the woman or fetus lives are threatened	69	69.0
When the fetus has severe abnormalities	53	53.0
When the woman has physical or mental disabilities	45	45.0
When a woman is physically or psychologically unprepared to raise a child	36	36.0
On request for everyone	7	7.0
Do you support that government should allow abortion in this country? (n=213)		
Yes	116	54.5
If you support government should allow abortion in this country, at what condition? (n=116)		
To prevent unsafe abortion	72	62.1
To prevent the death of women due to unsafe abortion	81	69.8
It is human right	41	35.3
If you don't support government to allow abortion in this country, why? (n=97)		
Not allowed in my religion	58	59.8
It is crime	49	50.5
It encourages many women to have unplanned pregnancy	44	45.4
It will risk the health of women	54	55.7

NB: For multiple responses the sum of the percentages may add up to more than 100.

Among those who support that government should allow abortion (n=116), the mentioned conditions under which abortion should be allowed were: to prevent unsafe abortion 72(37.1%) and to prevent the death of women due to unsafe abortion 81(41.8%). Among those who do not support (n=97), the reasons given were: not allowed in my religion 58 (28.3%), it is crime 49(23.9%), it encourages many women to have unplanned pregnancy 44 (21.5%) and it will risk the health of women 54 (26.3%) (Table: 4).

5.5. Knowledge regarding Medication Abortion

From a total of 213 respondents 159(74.6%) said they knew what MA means. Among the 159 respondents who claimed to know about MA, 112 (54.9%), 59 (28.9%), 31 (15.2%) and 2 (1%) said a MA means;

Table 6: Knowledge regarding medication abortion, College of Social Sciences, AAU, Addis Ababa, June 2013

Question	Frequency	Percentage
Do you know what a medication abortion means? (n=213)		
Yes	159	74.6
Medication Abortion means? (n=159)		
Abortion using abortion pill/drug	112	70.4
Abortion using any drugs/medication	59	37.1
Abortion by inserting objects through female genital	31	19.5
Abortion by drinking chemicals	2	1.3
Do you know where someone can have medical abortion done? (n=159)		
Yes	117	73.6
Which drug/drugs is/are used to abort pregnancy? (n=159)		
Misoprostol	3	1.9
Mifeprostol	2	1.3
Amoxicillin	7	4.5
Ampicilline	2	1.3
Methotrixate	2	1.3
Safe-T	3	1.9
I do not know	141	88.9
At what gestational age medication abortion is preferable? (n=159)		
Gestational age less than or equal to 63 days	30	18.9
Gestational age less than or equal 9 weeks	38	23.9
Gestational age greater than or equal 9 weeks	17	10.7
At any gestational age	4	2.5
I do not know	79	49.7

NB: For multiple responses the sum of the percentages may add up to more than 100.

Abortion using abortion pill/drug, Abortion using any drugs/medication, Abortion by inserting objects through female genital and abortion by drinking chemicals respectively. Among those who knew what MA means, 117 (73.6%) also said they knew where someone could have medical abortion service. The majority of the respondents 141(88.1%) did not know which drugs are used in case of MA but few of the respondents mentioned Misoprostol 3(1.9%), Mifeprostol 2(1.2%), Amoxicillin 7(4.4%), Ampicillin 2(1.2%), Methotrexate 2(1.2%), and Safe-T3(1.9%). Most of the respondents 79(47%) who claimed to know MA did not know the preferred gestational age to perform MA. But some of the respondents mentioned gestational age less than or equal to 63 days 30(17.9%) and gestational age less than or equal 9 weeks 38(22.6%), and few of them 4(2.4%) responded MA to be performed at any gestational age (Table 4).

As shown in Fig.2 out of 159 respondents who knew about MA, 88(55.3%) said that they got the information from radio 84(52.8%) from friends and the rest such as family, teacher and conference constituted 39(24.5%), 32(20.1%) and 15(9.4%), respectively. When asked where the MA will be performed the majority of the respondents 90(75.6%), from those who claimed to know where to perform (n=119), answered health center followed by private clinic 60(50.4%) (Fig 3). Though the majority of the respondent know what MA means, when knowledge score was done based on the five question from the knowledge question it was found that most of the study participants have low knowledge towards MA 97(61.0%) (Fig 4).

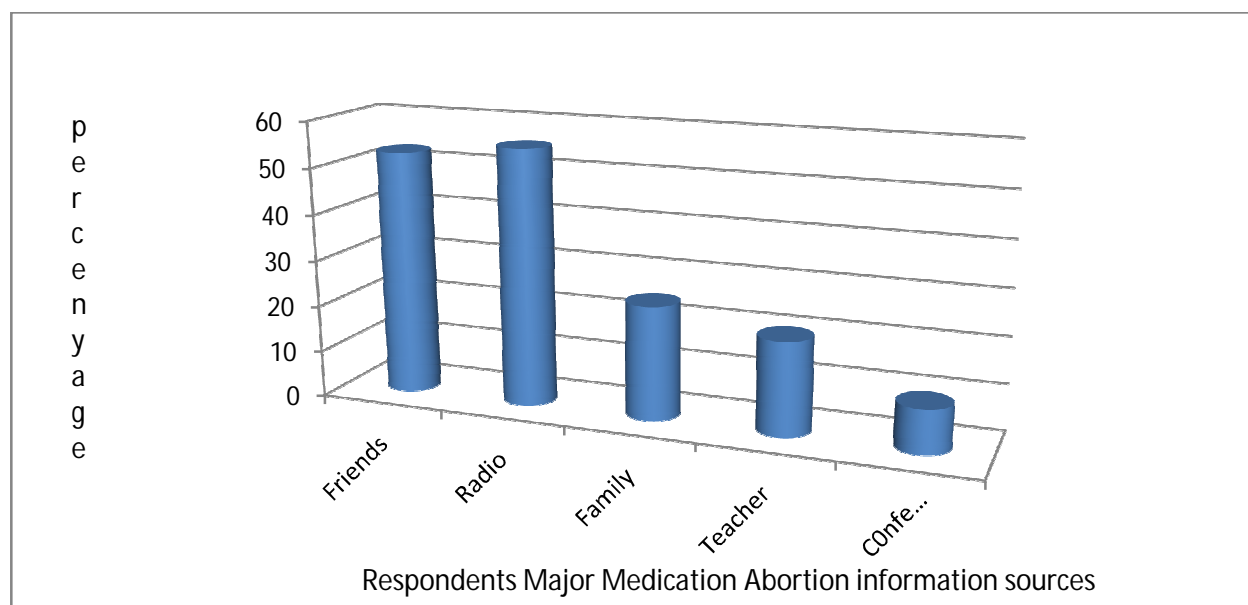


Figure 3: Major source of information regarding medication abortion, College of Social Sciences, AAU, Addis Ababa, June 2013.

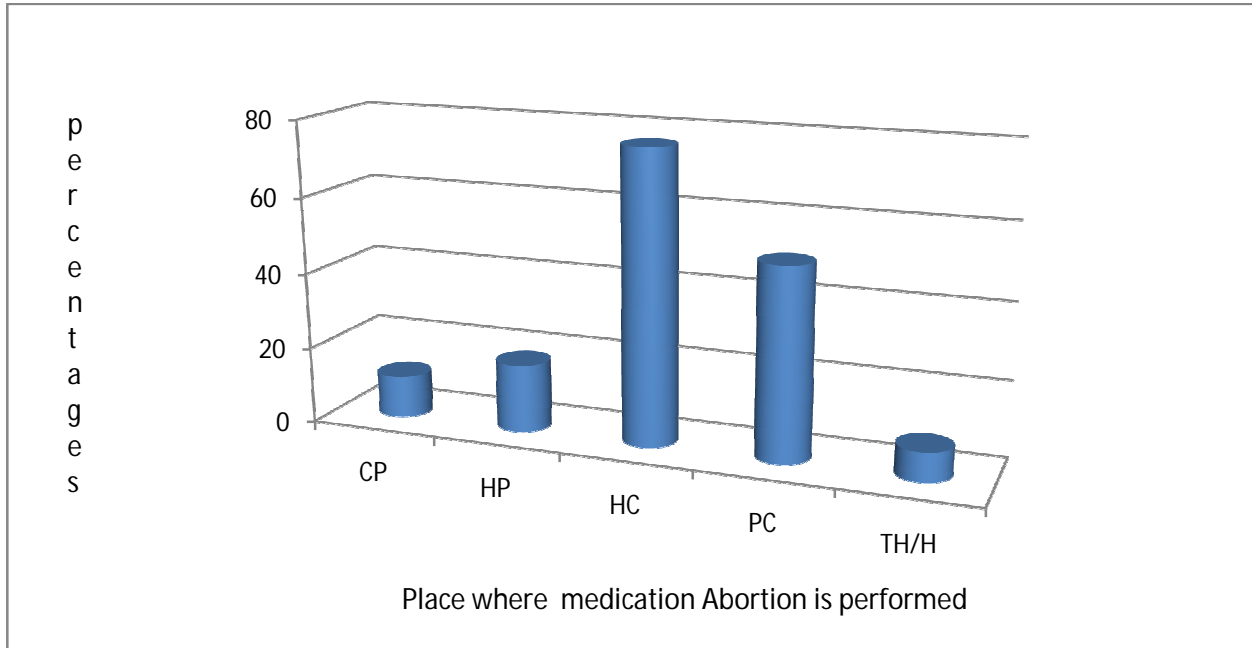


Figure 4: Institutions where Medication Abortion is performed, College of Social Sciences, AAU, Addis Ababa, June 2013.

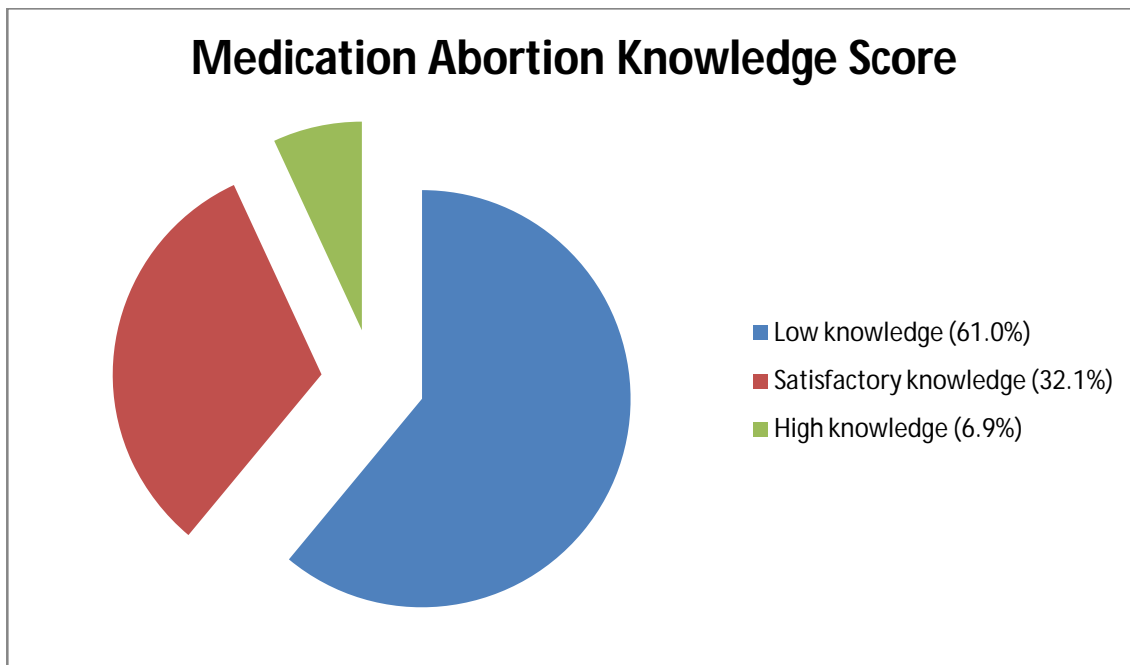


Figure 5: Knowledge score on medication Abortion, College of Social Sciences, AAU, Addis Ababa, June 2013

5.6. Attitude towards abortion

From the entire respondents, only 71(33.3) said that they would advise or encourage someone with unwanted pregnancy to undergo an abortion. The most preferred method was abortion by medication 43(60.6%) followed by surgical procedures 27(38%). Of all the respondents, 86 (40.4%) said that if they had unplanned pregnancy, they would consider abortion to terminate it and the reasons given were: it will affect my education 69(44.5%) followed by inability to raise the child 52(33.5%). Abortion by medication /drugs from health facility was the preferred way of abortion 59(68.6%) (Table 6).

Table 7: Attitude towards abortion, College of Social Sciences, AAU, Addis Ababa, June 2013

Question	Frequency	Percentage
Would you advise or encourage a colleague with an unwanted pregnancy to undergo an abortion? (n=213)		
Yes	71	33.3
Which type of abortion would you advise or encourage a colleague with an unwanted pregnancy to undergo an abortion? (n=71)		
Abortion by Surgical procedures	27	38.0
Abortion by medication /drugs	43	60.6
Abortion by traditional practitioners	1	1.4
If you have unplanned pregnancy will you consider abortion to terminate? (n=213)		
Yes	86	40.4
Why would you consider abortion if you have unplanned pregnancy? (n=86)		
I cannot raise the child	52	60.5
It will affect my education	69	80.2
To protect social stigma	34	39.5
Which type of abortion would you consider if you have unplanned pregnancy? (n=86)		
Abortion by Surgical procedures in the health facility	24	27.9
Abortion by medication /drugs from health facility	59	68.6
Abortion by medication /drugs from friends	3	3.5
Why won't you consider abortion if you have unplanned pregnancy?		
My religion cannot allow abortion	83	65.4
It is crime in our country	47	37.0
I don't want to kill my own baby	107	84.3

NB: For multiple responses the sum of the percentages may add up to more than 100.

5.7. Sexual and medication abortion practice

Ninety three (43.7%) of the respondents had sexual intercourse experience, while 120(56.3%) did not have. Among those who had sexual intercourse before, 24(25.8%) had incidence of pregnancy. Of these the majority 21(87.5%) undergone abortion, while 3(12.5%) gave birth. The type of abortion they used was: Abortion by Surgical procedures 7(33.3%), abortion by medication /drugs 13(61.9%), abortion by traditional practitioners 1(4.8%). Being safe is the most given reason for MA preference from those study participant who have had abortion experience followed by easy to take 6(46.2), avoids surgery and anesthesia 4(30.8), more effective 4(30.8), increased privacy and confidentiality 3(23.1) and it is more natural 2(15.4) (Table 7).

Table 8: Sexual and abortion related practice, college of social science, AAU, Addis Ababa, June 2013.

Question	Frequency	Percentage
Have you ever had sexual intercourse before? (n=213)		
Yes	93	43.7
If you had sexual intercourse before was there incidence of pregnancy? (n=93)		
Yes	24	25.8
If there was incidence of pregnancy, what action did you take? (n=24)		
Gave birth	3	12.5
Undergone abortion	21	87.5
If you had undergone abortion; which type of abortion did you use?		
Abortion by Surgical procedures	7	33.3
Abortion by medication	13	61.9
Abortion by traditional practitioners	1	4.8
Reason given for MA preference (n=13)		
It is safe	7	53.8
It is easy to take	6	46.2
It is more natural	2	15.4
Avoids surgery and anesthesia	4	30.8
More effective	4	30.8
Increased privacy and confidentiality	3	23.1
Others	5	38.5

Others*= it doesn't have side effect, much quicker

NB: For multiple responses the sum of the percentages may add up to more than 100.

5.8. Determinants of knowledge and practice towards medication abortion

5.8.1. Socio-demographic variables associated with MA knowledge

In this study the possible predicting factors that could affect the knowledge of medication abortion were tested using binary logistic regression. The test included variables; age group, Religion, Department, Year of study, marital status, residence, Mother Education, Father Education, Parents' profession. None of the variables showed statistical significant association (Table 8).

Table 9: Socio-demographic variables affecting MA knowledge among regular undergraduate female students of College of Social Sciences in AAU, Addis Ababa, June 2013.

Variables		Yes (%)	No (%)	OR (95% CI)	AOR (95% CI)
Age group	18-20	76(47.8)	33(61.1)	1	1
	21-23	78(49.1)	19(35.2)	1.783[0.934-3.404]	2.577[0.990-6.710]
	≥24	5(3.1)	2(3.7)	1.086[0.200-5.883]	1.296[.143-11.767]
Religion	Orthodox	114(71.7)	29(53.7)	1	1
	Muslim	6(3.8)	6(11.1)	0.254 [0.076-0.847]	0.466[0.101-2.146]
	Catholic	4(2.5)	2(3.7)	0.509[0.089-2.915]	0.383[0.054-2.728]
	Protestant	32(20.1)	17(31.5)	0.479[0.234-.979]	0.542[0.232-1.270]
Department	Archeology	11(6.9)	1(1.9)	2.444 [.275-21.749]	4.227[0.380-47.073]
	Geography and ES	11(6.9)	2(3.7)	1.222 [0.225-6.625]	4.222[0.527-33.830]
	History	2(1.3)	2(3.7)	0.222 [0.027-1.823]	1.970[0.068-56.823]
	Philosophy	7(4.4)	1(1.9)	1.556 [.167-14.480]	4.734 [0.331-67.712]
	PSIR	31(19.5)	10(18.5)	0.689 [0.242-1.962]	1.156 [0.336-3.978]
	Soc. Anthropol.	26(16.4)	12(22.2)	0.481 [0.172-1.345]	0.841 [0.224-3.156]
	Sociology	35(22.0)	18(33.3)	0.432 [0.166-1.122]	0.785 [0.224-2.743]
	Social Work	36(22.6)	8(14.8)	1	1

Year of study	I	40(25.2)	18(33.3)	0.593 [0.172-2.038]	1.061[0.170-6.606]
	II	59(37.1)	19(35.2)	0.828 [0.245-2.799]	0.873[0.154-4.954]
	III	45(28.3)	13(24.1)	0.923 [0.261-3.267]	1.040[0.190-5.703]
	IV	15(9.4)	4(7.4)	1	1
Marital status	married	5(3.1)	2(3.7)	1.083 [0.197-5.949]	1.370[0.192-9.789]
	Single (without R/ship)	94(59.1)	26(48.1)	1.567 [0.832-2.950]	1.444[0.695-3.004]
	Single (In R/ship)	60(37.7)	26(48.1)	1	1
Residence	Campus	58(36.5)	24(44.4)	0.718 [0.384-1.343]	0.936[0.426-2.056]
	Outside campus	101(63.5)	30(55.4)	1	1

5.8.2. Parents related factors associated with knowledge about MA

Students' Mother and father educational status and family profession were used and analyzed if there were association with their knowledge about MA. As shown in Table 9 students with father who are illiterate had low knowledge regarding MA compared to students having father's who are educated (AOR=0.112 [0.013-0.969]) and it showed statistically significant association. Though mother educational status (illiterate) shows statistical significance at crude odds ratio, upon adjustment for, age group, Religion, Department, Year of study, marital status, residence, Mother Education, Father Education, Parent medical profession the effect of mother's educational status (illiterate) was not found to be statistically significant (OR=0.258 [0.088-.762]) (Table 9).

Table 10: Parental background characteristics influencing the MA knowledge of regular undergraduate female students of College of Social Sciences in AAU, Addis Ababa, June 2013.

Variables		Yes (%)	No (%)	OR (95% CI)	AOR (95% CI)
Mother Educational status	Illiterate	8(5.0)	8(14.8)	0.258 [0.088-.762]*	0.269 [0.056-1.291]
	1 ⁰ Education	30(18.9)	11(20.4)	0.705 [0.308-1.615]	0.734 [0.222-2.424]
	2 ⁰ Education	32(20.1)	12(22.2)	0.689 [0.308-1.544]	0.821 [0.292-2.309]
	Above 2 ⁰ Education	89(56.0)	23(42.6)	1.00	1.00
Father Educational status	Illiterate	2(1.3)	7(13.0)	0.088 [0.018-.446]*	0.112 [.013-0.969]*
	1 ⁰ Education	22(13.8)	4(7.4)	1.704 [0.550-5.278]	1.942 [0.458-8.238]
	2 ⁰ Education	22(13.8)	8(14.8)	0.852 [0.349-2.082]	0.695 [0.217-2.226]
	Above 2 ⁰ Education	113(71.1)	35(64.8)	1.00	1.00
Medical professional in the family	Yes	34(21.4)	12(22.2)	1.050[0.499-2.213]	1.663 [0.653-4.236]
	No	125(78.6)	42(77.8)	1.00	1.00

Note: * = Statistically significant.

5.8.3. Socio-demographic variables associated to medication abortion practice

Socio-demographic variables of students were analyzed if there were association with their MA practice. By applying binary logistic regression the following variables showed statistical association with practice of MA.

Table 11: Predictors of medication abortion practice of regular undergraduate female students of College of Social Sciences in AAU, Addis Ababa, June 2013.

Variables		Yes (%)	OR (95% CI)	AOR (95% CI)
Age group	18-20	9(69.2)	1.00	1.00
	21-23	4(30.8)	0.478 [0.142-1.604]	0.208 [0.040- 1.090]
Year of study	I	4(30.8)	1.00	1.00
	II	5(38.5)	0.925[0.237-3.606]	1.160 [0.203- 6.640]
	III	3(23.1)	0.736 [0.157-3.446]	0.955 [0.135- 6.743]
	IV	1(7.7)	0.750 [0.079-7.154]	1.505 [0.089- 25.526]
Marital status	Single (without R/ship)	8(61.5)	1.157[0.365-3.667]	1.443 [0.377- 5.522]
	Single (In R/ship)	5(38.5)	1.00	1.00
Residence	Campus	1(7.7)	0.122[0.016-0.960] *	0.081 [0.009- 0.708] *
	Outside campus	12(92.3)	1.00	1.00
Knowledge on MA	Low Knowledge	9(69.2)	1.00	1.00
	Satisfactory knowledge	2(15.4)	0.399[0.083-1.921]	0.411 [0.072-2.359]
	High Knowledge	1(7.7)	0.978 [0.112-8.538]	0.723 [0.070-7.445]

Note: * = Statistically significant.

Among students' socio-demographic characteristics, residence of the study participants was identified as major determinant (predictor) of MA practice in this particular study. When we compare MA practice among participants who live in the campus and outside the campus those students who live in the campus (AOR=0.081 [0.009- 0.708]) had lower MA practice than those living outside the campus (Table 10).

5.8.4. Parental factors associated with medication abortion practice

Mothers' and fathers' educational status and family profession was used and analyzed if they were predictors of MA practice. Father educational status (1⁰ education) showed statistical significance association (AOR=6.803 [1.054-43.897]) (Table 11).

Table 12: Predictors of family socio-demographic variables to medication abortion practice of regular undergraduate female students of College of Social Science in AAU, Addis Ababa, June 2013.

Variables		Yes (%)	OR (95% CI)	AOR (95% CI)
Mother Educational status (n=13)	1 ⁰ Education	5(38.5)	2.083 [0.622-6.976]	0.741 [0.116-4.730]
	2 ⁰ Education	1(7.7)	0.349 [0.042-2.921]	0.251 [0.023-2.694]
	Above 2 ⁰ Education	7(53.8)	1.00	1.00
Father Educational status	1 ⁰ Education	5(38.5)	4.796 [1.394-16.504]	6.803 [1.054-43.897] *
	2 ⁰ Education	1(7.7)	0.695 [0.082-5.863]	1.268 [0.114-14.134]
	Above 2 ⁰ Education	7(53.8)	1.00	1.00
Medical professional in the family	Yes	4(30.8)	0.598 [0.176-2.038]	0.578 [0.159-2.099]
	No	9(69.2)	1.00	1.00

Note: * = Statistically significant.

5.9. Findings of key informant interviews

In-depth interview was held with key informants from students' clinic, female student association, girls club and student counsel. All except one (from student clinic which is nurse) were students in the campus. Three of the four informants were female. Different problems were witnessed during the interviews with regard to the problems that may expose female undergraduates to unsafe sex, unplanned pregnancy, unsafe abortion and abortion complication. Most of the key informants knew what MA and believe that abortion service must be given in the students' clinic.

5.9.1. Findings of key informant interviews in the student clinic

The student clinic started to give reproductive health services since 01/08/2004 EC. It gives the service without recording the names rather uses codes for reporting purpose except for Depo-Provera injection. Since then only 154 students at day time and 20 at night used the service. At day time 44, 82 and 8 used combined oral contraceptives (COC), Depo-Provera and emergency pills, respectively. Of whom 58 were new acceptors, while 75 were repeat acceptors. At night seventeen students took COC and all of them were male and one female student took emergency pills. And fourteen were new acceptor while the rest are repeat acceptors. The clinic was supplied with those commodities from DKT-Ethiopia through student Dean's office. The clinic does not provide abortion and post abortion services for students who need the service though the clinic is capable of providing the service specially medication abortion.

Reproductive health problems

According to the key informant from student clinic, students come to the clinic after when they had unprotected sexual intercourse so that they can give them emergency pills and/or to be tested for unwanted pregnancy. Having known that they have unplanned pregnancy they usually won't come to the clinic rather go to private clinic, government health centers and to traditional healers to get abortion service. When asked about the kind of help they needed after they become pregnant following pregnancy test in the clinic the informant responded: ".....some of them want the pregnancy to be terminated, and some who are married may prefer to keep it. For those who want abortion we provide and counsel the type of abortion available and let them choose and we then refer to other facility (like; French youth center and Meristopes clinic) for abortion or they will go by themselves to other private clinics." According to the informant most of the students who seek abortion were below 25 years old. The major reasons given for abortion by the students were termination of schooling and fear of family since they are not married.

Knowledge of abortion and medication abortion

According to the key informants from student clinic, abortion is termination of a fetus before 28 weeks of gestation and there are different type of abortion like spontaneous abortion and induced abortion and MA is one of induced abortion. The KI also narrated that, MA is a type of abortion done by using abortion pills that consists of different drugs up to nine weeks of pregnancy, but failed to identify the type of drugs and the recommended doses used in Ethiopian guideline for early MA though she and her colleagues took training on MA. This was what she said “.... Since we don’t provide the service I don’t remember the name and the dose given but I think it is a combination of drugs”.

Awareness creation and provision of medication abortion

The KI said that, when student become positive after pregnancy test they would counsel them whether they want to keep the fetus or abort it and then they will provide other birth control options to protect them from future unplanned pregnancy. When asked about any initiative organized and given to students about reproductive health seminars including unplanned pregnancy and unsafe abortion from the clinic in the past the informant responded “.....yes we did. In 2004 and 2005 we gave reproductive health seminars in collaboration with DKT and gender office for all students (male and female) in the campus and for only female students around female student’s dormitory on; birth control (family planning), prevention of unprotected sex, sexual harassment, gender violence, HIV/AIDS and sexually transmitted disease, and the like.” And when asked about the provision awareness creation on MA KI replied “.....I think it will be good if we give awareness creation on MA since it may provide an option in case of unplanned pregnancy. But my fear is that having known the availability of the medication for the abortion they may forget protection during sexual intercourse and as the result they may be affected by other sexually transmitted diseases like, HIV/AIDS.”

5.9.2. Key informant interviews from student based associations

Student based associations are very important in creating awareness on reproductive health problem that student may face in the university. Based on their relevance to this study, key informants from student counsel, female student association and girls club were selected and interviewed. The contribution of the student associations in reproductive health problem depends on the role they play. For example, girls club gives awareness on gender related issues which has five parts; disability, counseling, law, academic and literature and drama. But most of the time they deal with gender related problems. For instance, they provide let's play kind of program with gender office every week on gender related issues like abortion and outcome of peer pressure. And the female student association tries to solve female student's economic, social, academic and psychological problem with other stakeholders and to let them know and benefit from their rights and responsibilities while they are in the university. When they come with the above problem they link them with the respective stakeholders, like gender office, to solve their problem.

Reproductive health problems

According to the KIs, students in the campus are facing different kinds of reproductive health problems such as unplanned pregnancy and unsafe abortion. But they usually don't consult the above association rather they find solution by themselves and also most of the time they prefer associations that are composed of female students. They usually consult these associations when they face other kind of problems like health, disciplinary, teaching and learning, economic and when the campus food service, sanitation and living conditions are compromised. For example when asked about the occurrence of unwanted pregnancy in the campus and the kind of help they need informant from student counsel responded "...students won't come to us when they face unwanted pregnancy and we still did not encounter such case. Most of the times we are not expected to facilitate things for the students who need such kind of help. Secondly, since they are female students most of the time they prefer female students to share their problem, unfortunately we are (the student counsel) composed with more than 90% male students. So, it won't be easy for them to consult us when they face reproductive health problem."

Risk of exposure to unplanned pregnancy, awareness towards it and abortion

All KIs from students' counsel, female student' association and girls club agreed that female Social Science students are at higher risk to unplanned pregnancy and unsafe abortion than students from other colleges due to the following reasons; Students from Social Sciences College have no or minimal pressure when compared to other colleges in the AAU. Therefore they will have plenty of times for fun and those students who have plenty of times for fun are the ones that have higher risk for unplanned pregnancy and unsafe abortion.

Factors that predispose female student for unplanned pregnancy and unsafe abortion

All of the key informants said that low economic background is the main exposing factor for unplanned pregnancy and unsafe abortion especially students from countryside are more affected than those from the urban areas. For example, KI from Students Counsel mentioned "... specially those students with low economic background to get the money they will dress well and wait at the gate for the so called "sugar daddy's" and then it happens, I mean this is how most of the time unplanned pregnancy, unsafe abortion and HIV occurs among female students".

Key informants also mentioned that the place from where they come from also contribute to the unplanned pregnancy. "... most of the time the place where they come from and the campus do not match so in order to fill this gap they tend to jump this gap and become addicted to alcohol and khat, and they will start to go to night clubs". According to respondents the cultural background of the students from where they come from also affects their attitude towards unsafe sex, unplanned pregnancy and abortion. Informant from girls club explained: "...our culture how we are raised is one big problem especially those coming from regions or countryside that have little or no knowledge about how to protect oneself from peer pressure and unsafe sex and unplanned pregnancy and abortion".

How to protect unplanned pregnancy and unsafe abortion

KIs understood that absence of recreational centers in the campus force students to go to piassa, kasanchis and bole to have fun especially at times of post exam and been exposed to the risk of unwanted pregnancy and its consequences. Key informant from student counselor explained: "...to prevent these problems there must be different recreation centers to fulfill the need of the students so that they won't go out. And making them busy by providing different seminars,

tournaments (like; sport, literature and drama) among students of different campus and also music concert. For example, there are students in the theatrical art and yared music school that the university may use without extra cost that have a potential to provide their talents to the students. And of course most of the time students of low educational background are mostly affected by such problem so providing tutorial for these students may change their attitude towards education.” They also mentioned that it is important to provide seminar when fresh students come together with different stakeholders, like girls club, gender office, female student association and student clinic by inviting professionals, on reproductive health problem (about how to deal with unplanned pregnancy if it occurs and how to prevent it too), HIV/AIDs and sexually transmitted disease that they may face in the campus. Respondent from female student association explained: “.....since economic problem is one and the most problem, we will try to solve this problem with other stakeholders.”

Opinion on provision of medication abortion in the students’ clinic

All the KIs are of the opinion that “provision of abortion service especially MA has good and bad side. The good thing it will provide option for students with such problem and the bad thing is it may give students over confidence and will lead to unsafe sex and consequently HIV/AIDs and other sexually transmitted disease. But it is good to have the service in the campus. It is best if we work more on awareness creation on MA!” But when informant from girls club asked about giving awareness creation on MA she explained: “..... we don’t do that, do you know why? if we give awareness on MA, we are promoting abortion. This club believes only in prevention and abstinence. And it will have negative impact as it may promote students to have unsafe sex consequently may expose for HIV/AIDs and other sexually transmitted diseases.”

6. Discussion

Consideration of varying sets of covariates & their varying measurement scales in the data analysis and variations in methods of data analysis do not allow for straight forward comparison of result between the different studies. Assessment on knowledge, attitude and practice regarding MA among regular undergraduate female students of the College of Social Science in Addis Ababa University was done and there was lack of similar studies, even, in other countries. In view of these limitations, the findings of this particular research discussed as follows.

The age of the study participants ranged from 18 to 25 in which the likes of peer pressure, being active for sexual intercourse and of course making an autonomous decision begins. Most of the students parents have some forms of college education which may affects students knowledge towards MA and it was found that students having father educational background with some forms of college education have higher knowledge of MA than those having illiterate father (AOR=0.112 [.013-0.969]) and shows statistically significant association. This is may be due to the fact that parents having higher educational background let their children know additional and important lesson beside the academic program. Forty six (21.6%) of the study participants' parents have medical related profession which will affect students knowledge towards MA. And though it is not significant in this study, students having family with medical profession history have higher knowledge towards MA (AOR=1.663 [0.653-4.236]).

The entire study participant 213(100%) have heard about abortion. This could be in part due to the seminars given on reproductive health issues by the stakeholders as witnessed by the key informants in the students counsel, girls club, female students association and student clinic from the sidist kilo campus. Media (82.6%) (Radio, television, news paper, internet and the like) was the main source of information about abortion followed by friends (70.0%). This is may be due to the fact that media plays a great role in prevention of disease and disability in promoting health behavior and providing information on different health issues nowadays. For example there is “tenachin” and “tenawo bebetwo” on ETV where some reproductive health problems are discussed.

Though most of the students know what safe and unsafe abortion means which was also may be attributed to the contribution of seminar given on reproductive health when freshman students

come, according to key informants, significant amount of the study participants do not know what safe abortion means.

About forty seven percent of the study participants said abortion is liberal and allowed in Ethiopia under some conditions, but 60(28.2%) said abortion is not legally allowed in Ethiopia, and 53(24.9) said they don't know whether it is allowed or not. Among those respondents who said abortion is legally allowed in Ethiopia (n=100), most of the respondents mentioned that abortion is allowed only for the conditions like; when the pregnancy is resulted from rape or incest (87(87.0%)), when the woman or fetus lives are threatened (69(69.0%)) and some of the study participants (7(7%)) responded on request for everyone. Study done in Ghana showed that only 16.5% of all respondents would attempt to outline the abortion law. Less than one third of these respondents simply stated that abortion is a criminal offence. However, about 14% of the students interviewed knew that abortions are legal in Ghana under certain conditions. The most commonly mentioned condition for which an abortion could be performed legally was, "if the pregnancy could cause risk to the physical health of the mother" (El-Adas, 2007). Though there is a lot to be done on awareness about the abortion law of the country, the current result showed the effect of awareness creation by the student based association in the campus, since according to the key informant from the respective association they provide awareness creation on reproductive health issues including abortion. Their awareness was may be in part due to the seminar given by the student clinic as witnessed by the key informants.

About three-fourth of respondents 159(74.6%) knew what MA means, but 54(25.4%) of them do not know about MA. Among the 159 respondents who claimed to know about MA, 112 (54.9%), 59(28.9%) said MA means; Abortion using abortion pill/drug, Abortion using any drugs/medication respectively. And the majority of the respondents got the information from radio (88(55.3%)) and friends (84(52.8%)). When the knowledge score was done 32.1% of the respondents who knows MA has satisfactory knowledge and the majority of them have low knowledge towards MA. A study done in Brazil on medication abortion knowledge among medical students showed that the percentage of the students who had heard about misoprostol as a means to induce abortion was 72% though only less than 3% had satisfactory general knowledge (Fernandes et al., 2012). The different in the result may be due to the difference in the sample size used since the later used higher sample size from three different universities and also the specific

knowledge questions used were different. And the effect of student based organization mentioned above in this study might have contributed for the higher knowledge score.

This study showed that among those who knew what MA means, 117(73.6%) also said they knew where someone can have medical abortion service. The majority of the respondents 141(88.1%) do not know which drugs are used in case of MA but few of the respondents those claimed to know MA responded as Misoprostol 3(1.9%), Mifiprostol 2(1.2%), Amoxicillin 7(4.4%), Ampicillin 2(1.2%), Methotrexate 2(1.2%), and Safe-T 3(1.9%). A study done in Ghana on the resolution of unintended pregnancy among female students at university of Ghana on 480 students when asked about their knowledge on the type of drug used only 8.75% of female students had ever heard about Misoprostol. Six percent of the students knew it was a tablet to terminate pregnancy (El-Adas, 2007). Though it is not strictly comparable due to difference in participant, method, objective and specific question the knowledge on mifiprostol in this study is small (1.2%) may be due to smaller study participant. And a study done on knowledge and practices among medical abortion seekers in southeastern Nigeria in 100 consecutive abortion seekers from which fifty-five percent of respondents were students where 33% had a tertiary education level 48% had used drugs for pregnancy terminations. Three percent and 2% of subjects had knowledge of misoprostol and mifiprostol, respectively. One percent of respondents had used misoprostol (Adnima et al. 2012). The difference in knowledge of the type of drug used for MA from the current study and this is may be due to difference in small sample and difference in participants.

Some study participants mentioned amoxicillin 7(4.4%) and ampicillin 2(1.2%) as the type of drug used to perform MA. From my anecdotal observation people, with unintended pregnancy, sometimes go to private pharmacy and ask for a strip (ten capsules) of “ampicillin” or “amoxacillin” to undergo unsafe abortion. Methotrexate is not indicated as option for MA in our country but a couple of respondents answered may be they have family or friend abroad who can send the drug for them or for their friend or family or they may read from books or internet sources. But those answered safe-T answered the correct medication name, since it is the brand name for the currently available MA pill that contains misoprostol and mifiprostol in our country.

Information about MA is not openly and publicly available but that it rather flows through hidden informal or “underground” channels. Female relatives, friends, neighbors and the sexual partner,

are the ones who provide information or help to identify sources of information such as women who had abortions in the past or who have been close to women in a similar situation, women's health organizations, health professionals, pharmacies and Internet sites (Costa, 1998). In this study most of the study participants mentioned health center and private clinic where MA by using abortion pill is performed. According to El-Adas, (2007), of the 42 students, 33 knew a pharmacy and 4 knew a hospital where they could obtain Misoprostol to perform abortion. According to Adnima et al. (2012), thirty-three percent of subjects purchased their abortion drugs in a pharmacy. The difference in this study may be due to the fact that the abortion pill is not provided in the public or private pharmacy in our country and it is only available in government health facilities and private clinics.

One third of the respondents 71(33.3%) has positive attitude towards abortion by advising or encouraging colleague with an unwanted pregnancy to undergo an abortion where most of them would advise or encourage abortion by medication /drugs 43(60.6%). But the majority of them 142 (66.7%) have negative attitude towards abortion and they don't advise or encourage abortion. According to a study done in Uganda on Knowledge and attitudes about induced abortions among female youth, 16% of the participants would advise or encourage a colleague to go for an abortion but 84% of them would not (Paluku et al., 2013). The difference on the attitude may be due to the deference in the socio-demographic composition of the study participants.

Of all the respondents, 86(40.4%) of them will consider abortion to terminate if they have unplanned pregnancy, and most of the reasons given were: it will affect my education 69(44.5%) and abortion by medication /drugs from health facility 59(68.6%) was the preferred type of abortion. According to Paluku et al., (2013), 14.7% participants would consider undergoing an abortion if they became pregnant. Though significant amount of the study participants have positive attitude towards abortion where some will advise colleague and some may use for them in case of unintended pregnancy that may arise due to rape or other reason, the student clinic does not provide abortion and post abortion service (Key informants). Even if most of the key informants want the service to be available, the clinic does not provide abortion service rather it only provides oral and inject able birth control methods including emergency contraceptives. Even though ICESCR entitles women to available, accessible, and acceptable reproductive health care, including abortion care (Erdman et al., 2008), female students in the AAU in sidist kilo

campus are not provided with abortion and post abortion care service even if the student clinic has the potential to provide the service (key informant from student clinic).

Ninety three (43.7%) of the respondents had sexual intercourse experience which is higher than a study done by El-Adas, (2007) where about 38% of all students interviewed had ever had sex. Where 24(25.8%) had incidence of pregnancy in which the majority 21(87.5%) of them undergone abortion. The majority of the study participants had used abortion by medication /drugs 13(61.9%) during abortion which is almost comparable with the study done by Woldetsadik et al., (2011), where 67.3% of women chose medical abortion. Being safe, easy to take, avoids surgery and anesthesia, increased privacy and confidentiality and it is more natural was the major given reason for MA preference from those study participants who have abortion experience in the current study where the same reason was mentioned for the preference of MA by the study participants from Woldetsadik et al., (2011).

In the present study possible determinants of MA knowledge and practice were tested using univariate as well as multivariate analyses through binary logistic regression and father educational status was found to be major determinant of MA knowledge. And students socio-demographic characteristics of the study participants; residence and father educational status were found to be major determinant (predictor) of MA practice in this particular study and showed statistical significant association with practice of MA.

7. Conclusion

Though 100% of the study participants in the CSS heard what abortion is, only 74.6% knows what MA and their major source of information were radio and friend. Majority of the respondents were found to have low knowledge score on MA. Medication abortion is acceptable by the study participants where one third of the respondents have positive attitude towards abortion by advising or encouraging colleague with an unwanted pregnancy to undergo an abortion where most of them would advise or encourage abortion by medication /drugs (Medical Abortion). Of all the respondents, 86(40.4%) will consider abortion to terminate if they have unplanned pregnancy. Father educational status was found to have significant association with MA knowledge of the study participants. Residence of the study participants and father educational status were identified as major determinant (predictor) of MA practice in this particular study.

8. Recommendation

Based on the results of the study the following recommendations can be forwarded:

- It would be much beneficial to female students and the public on the safe abortion method including MA giving emphasis on the promotion of birth control by AAU in collaboration with DKT-Ethiopia, Ipas-Ethiopia, AACARHB and local mass media.
- The student clinic should consider giving abortion service to prevent female students from going to unsafe abortion practitioners.
- Similar studies should be conducted in different parts of the country so as to get a national picture on the medication abortion knowledge, attitude and practice.

8. References

- Adinma E D, Adinma JIB, Iwuoha C, Akiode A, Oji E and Okoh M (2012). Knowledge And Practices Among Medical Abortion Seekers In Southeastern Nigeria. Department of Community Medicine, Department of Obstetrics and Gynecology, Nnamdi Azikiwe University, Nnewi; Research and Evaluation Unit, Ipas, Abuja, Nigeria. Vol 43 No. 2. Accessed at <http://www.ncbi.nlm.nih.gov/pubmed/23082598>
- Afable-Munsuz A, Braveman P (2008): Pregnancy intention and preterm birth: differential associations among a diverse population of women. *Perspect Sex Reprod Health* , 40(2):66-73.
- Amissah EB (2004). Woman-Centred Safe Abortion Care in Africa. *African Journal of Reproductive Health*, Vol.8, No. 1, pp. 37-42.
- Angela El-Adas (2007). The Resolution of Unintended Pregnancy among Female Students at the University of Ghana, Legon. Accessed at http://www.popcouncil.org/uploads/pdfs/2007RH_GhanaFemaleStudentsUnintendedPreg.pdf
- Ashenafi M (2004). Advocacy for Legal Reform for Safe Abortion. *African Journal of Reproductive Health*, 8(1): 79-84.
- Baggaley RF, Burgin J and Campbell OMR (2010). The Potential of Medical Abortion to Reduce Maternal Mortality in Africa: What Benefits for Tanzania and Ethiopia? Volume 5 | Issue 10 | e13260. Accessed at <http://researchonline.lshtm.ac.uk/2402/1/pone.0013260.pdf>
- Barbara Rylko-Bauer (1996). Abortion from a Cross Cultural Perspective: An Introduction. *Soc. Sci. Med.* 42 (4):479-482.
- bpas. Early Medical Abortion A guide for practitioners. Accessed at http://www.bpas.org/js/filemanager/files/earlymedicalabortion_v7.pdf
- Cadmus EO and Owaje ET (2011). Knowledge about complications and practice of abortion Among female undergraduates in the university of ibadan, Nigeria. *Ann Ibd. Pg. Med 2011. Vol.9, No.1* 19-23

Center for Health and Gender Equity (2010): Women's Sexual and Reproductive Health and Rights in Ethiopia. The Role of the National Government and U.S. Foreign Assistance. Accessed at http://www.genderhealth.org/files/uploads/change/publications/CHANGE_Ethiopia_Study_Report_web_FINAL.pdf

Center for Reproductive Rights (2006). A Tool for Advancing Reproductive Rights Law Reform http://www.k4health.org/sites/default/files/pub_bo_GG_TOC_Foreward.pdf

Center for Reproductive Rights (2004). Crafting an Abortion Law that Respects Women's Rights: Issues to Consider. Available at http://www.reproductiverights.org/pub_bp_craftingabortionlaw.pdf

Centre for Reproductive Rights (2008). Annual Report, Centre for Reproductive Rights.

Costa SH (1998): Commercial availability of misoprostol and induced abortion in Brazil. Int J Gynecol Obstet 1998, 63(Suppl 1):131–139.

Crane BB, Smith CEH Ipas (2006). An Essential Strategy for Achieving the Millennium Development Goals to Improve Maternal Health, Promote Gender Equality, and Reduce Poverty. Accessed at http://www.unmillenniumproject.org/documents/Crane_and_Hord-Smith-final.pdf

Dabash R and Fahimi FR (2008). Abortion in the Middle East and North Africa. Population Reference Bureau. Accessed at <http://www.prb.org/pdf08/MENAabortion.pdf>

Davis VJ (2006). Induced Abortion Guidelines. Clinical practice guidelines. JOGC No 184. <http://sogc.org/wp-content/uploads/2013/01/gui184E0611.pdf>

Dixon N (2003). Abortion Law Reform: An Overview of Current Issues. Queensland Parliamentary Library. Accessed at <http://www.parliament.qld.gov.au/Parlib/Publications/publications.htm>

Erdman JN, Grenon A, and Wilson LH (2008). Medication Abortion in Canada: A Right-to-Health Perspective. American Journal of Public Health | Vol 98, No. 10.

- Fantahun M, Chala F, Lola M (1995). Knowledge, Attitude and practice of family planning among high school students in North Gonder. *Ethiopian Medical Journal*.;33(1): 21-29.
- Fasika Ferede Alemu (2010). Minors' Awareness About The New Abortion Law And Access To Safe Abortion Services In Ethiopia: The Case of Marie Stopes International Ethiopia Centers in Addis Ababa. Accessed at http://amma.socsci.uva.nl/theses/alemu_fasika.pdf
- FDRE (2004): The Criminal Code of the Federal Democratic Republic of Ethiopia. Crimes against life unborn: Abortion:Section II:219-221.
- Fernandes KG, Camargo RPS, Duarte GA, Faúndes A, Sousa MH, Filho NLM and Pacagnella RC (2012). Knowledge of medical abortion among Brazilian medical students *International Journal of Gynecology and Obstetrics* 118 S10–S14
- Fiala C and Danielsson GK (2006). Review on medical abortion using mifepristone in combination with a prostaglandin analogue. *Contraception* 74: 66–68. Accessed at http://www.revho.fr/professionnels/bibliographie/sources_doctrinales/anglais/numero_special_2006/review_fiala.pdf
- Glasiera A, Fairhurst K, Wyke S, Ziebland S, Seaman P, Walkerc J, Lakhaa F (2010). Advanced provision of emergency contraception does not reduce abortion rates .Published by Elsevier Inc. doi:10.1016/j.contraception.2004.01.002. Accessed at <http://www.libgen.org/scimag4/10.1016/j.contraception.2004.01.002.pdf>
- Goodman N, Sackett A & Vasilver R (2008). Bridging the Gaps: Implementation of Comprehensive Abortion Care in Ethiopia. <http://milanoschool.org/wp-content/uploads/2012/07/2008-Fall-EngenderHealth-Abortion-Care-in-Ethiopia.pdf>
- Guttmacher (2010). Facts on Unintended Pregnancy and Abortion in Ethiopia. In brief. <http://www.guttmacher.org/pubs/FB-UP-Ethiopia.pdf>

- Heidi Bart Johnston (2002). ABORTION PRACTICE IN INDIA. A REVIEW OF LITERATURE. Centre for Enquiry into Health and Allied Themes. Accessed at <http://www.cehat.org/publications/PDF%20files/r24.pdf>
- Ipas-Ethiopia(2013). Programs integrating abortion and contraceptive services expand women's reproductive health options in Ethiopia. <http://www.ipas.org/en/News/2013/November/Programs-integrating-abortion-and-contraceptive-services-expand-women-s-reproductive-health.aspx>
- Jackson E, Johnson BR, Gebreselassie H, Kangaude GD and Mhango C (2011).A strategic assessment of unsafe abortion in Malawi. *Reproductive Health Matters* ;19(37):133–143 <http://download.journals.elsevierhealth.com/pdfs/journals/0968-8080/PIIS0968808011375635.pdf>
- Kapur K, Joneja GP, Biswas M(2006). Medical Abortion-An Alternative to Surgical Abortion. *MJAFI* 2006; 62 : 351-353.
- Khan KS, Wojdyla D, Say L, Gulmezoglu AM, Van Look PF (2006). WHO analysis of causes of maternal death: a systematic review. *Lancet* 367: 1066–1074. Accessed at http://www.nuigalway.ie/safemotherhood/documents/who_lancet_review_on_causes_of_maternal_mortality.pdf
- Leitner Center (2010). Exporting Confusion: U.S. Foreign Policy as an Obstacle to the Implementation of Ethiopia's Liberalized Abortion Law. Accessed at http://www.leitnercenter.org/files/LeitnerCtr_EthiopiaReport_WebVersion2010.pdf
- Lema V.M, Rogo K.O., Kamau R.K (1996). Induced Abortion in Kenya: Its Determinants and Associated Factors, *East African Medical Journal*, 1996, Vol.
- Michael A, Patrick O, Adedapo A (2003): Knowledge and Perception of Emergency Contraception among Female Nigerian Undergraduates. *IntFam Plan Perspect*, 29:85-86. <https://www.guttmacher.org/pubs/journals/2908403.html>

- NCTPE (2003). National Committee on Traditional Practices of Ethiopia. Addis Ababa, Ethiopia. Accessed at <http://cnhde.ei.columbia.edu/ethmdg/newindex2.html>
- Ngo TD, Park MH, Shakura H & Free C (2011). Comparative effectiveness, safety and acceptability of medical abortion at home and in a clinic: a systematic review. *Bull World Health Organ*; 89:360–370. Accessed at <http://www.who.int/bulletin/volumes/89/5/10-084046.pdf>
- Ngo TD, Park MH and Xiao Y (2012). Comparing the World Health Organization versus China-recommended protocol for first-trimester medical abortion: a retrospective analysis. *International Journal of Women's Health*.
- Olukoya A. A. , Kaya A., Ferguson B. J. and AbouZahr C. (2001). Unsafe Abortion in Adolescents. *International Journal of Gynaecology & Obstetrics*.
- Olukoya P (2004). Reducing Maternal mortality from unsafe abortion among Adolescents in Africa *Afr J Reprod Health*. 2004;8(1):57-62.
- Paluku JL, Kalisoke S, Wandabwa J and Kiondo P (2013). Knowledge and attitudes about induced abortions among female youths attending Naguru Teenage Information and Health Centre, Kampala, Uganda. *Journal of Public Health and Epidemiology*.
- Patel CJ and Myeni MC (2008). Attitudes Toward Abortion in a Sample of South African Female University Students, University of KwaZulu-Natal Durban, South Africa. *Journal of Applied Social Psychology*, 38, 3, pp. 736–750.
- Prata N, Passano P, Sreenivas A & Gerdt CE (2010). Maternal mortality in developing countries: challenges in scaling-up priority interventions. *Women's Health* 6(2), 311–327. Accessed at <http://bixby.berkeley.edu/wp-content/uploads/2011/01/2010-Prata-et-al-MM-in-Dping-Cs-in-Womens-Health.pdf>

- Ronco C (2013). Discursive Constructs of Abortion amongst a Group of Male and Female Students at the University of the Witwatersrand. Accessed at <http://wiredspace.wits.ac.za/bitstream/handle/10539/13974/Masters%20Research%20Dissertation.pdf?sequence=2>
- Shah I, Åhman E (2009).Unsafe Abortion: Global and Regional Incidence, Trends, Consequences, and Challenges. *J Obstet Gynaecol Can*;31(12):1149–1158.
- Singh S (2006). Hospital admissions resulting from unsafe abortion: estimates from 13 developing countries. *Lancet*; 368: 1887-92.
- Tadesse E, Yoseph S, Gossa A (1994). Illegal abortion in five hospitals in Addis Ababa. *Ethiopian Medical Journal*.; 32 (4):283-84
- Tautz S (2004): Unsafe abortion, Review paper, GTZ, Sector project Reproductive Health/evaplan gmbh. Accessed at <http://www.scribd.com/doc/75419672/Abortion>
- Tine G (2002). Induced abortion and moral dilemma. *Culture, Medicine and Psychiatry* 13(26): 313–338.
- University of California, San Francisco (2001). Center for Reproductive Health Research & Policy; Early Medical Abortion: Issue for practice, Accessed at <http://bixbycenter.ucsf.edu/publications/files/EMAR.pdf>
- Woldetsadik MA, Sendekie TY, White MT and Desalegn T Zegeye (2011). Client and acceptability for medical abortion and MVA as early pregnancy termination method in Northwest Ethiopia. *Reproductive Health*, 8:19. Accessed at <http://www.reproductive-health-journal.com/content/8/1/19>
- WHO (1998). Emergency contraception, A guide for service delivery, Geneva. Accessed at www.popline.org/docs/1254/135130.html

World Health Organisation (2004). Unsafe abortion global and regional estimates of unsafe and associated mortality in 2000. Geneva: WHO Publication. Accessed at <http://whqlibdoc.who.int/publications/2004/9241591803.pdf>

World Health Organization (2006). Frequently asked clinical questions about medical abortion. Accessed at http://whqlibdoc.who.int/publications/2006/9241594845_eng.pdf

Annexes

I. Consent Form/ Cover Letter

I am Gizaw Thomas, a graduate student in the program of pharmacoepidemiology and social pharmacy, in the school of pharmacy Addis Ababa University. I am working on a study on the knowledge, attitude and practice regarding medication abortion among regular undergraduate female students of college of social science in Addis Ababa University at sadist kilo campus as part of my graduate studies.

The findings of this study will be of high importance in the improvement of reproductive health of female students in particular and women in general through providing insight in to the current situation of knowledge attitude and practice towards medical abortion. So your participation in this study is highly appreciated.

The information you will be providing is going to be kept in confidence and used only for the purposes of the study. In addition no personal identifiers are used and the data will be analyzed in an aggregate manner.

This survey may take 10 to 15 minutes of your time and you are kindly requested to proved honest answers to the questions. If you have read the above statements, understood them and are consenting to be involved in the study, please do continue with the survey. You have full right to terminate at any time from giving the information on the questionnaire.

Thank you for your cooperation!!!

For any questions you can contact me through this address:

Gizaw Thomas: cell phone no. 0913-27-17-16

Email: gizoyee@yahoo.com

II. KAP Questionnaire
Addis Ababa University
College of Health Sciences, School of Pharmacy
Questionnaire for the study on regular undergraduate female students in Addis Ababa
University
(ADDIS ABABA, 2013)

Dear respondents,

My name is *Gizaw Thomas* I am post graduate student at Addis Ababa University, College of Health Sciences, School of Pharmacy. The **main purpose** of this study is **to assess knowledge, attitude and practice among regular undergraduate female students regarding medication abortion in Addis Ababa University College of Social Science.**

Thank you for consenting to complete this questionnaire. Your help in filling out the questionnaire will assist to carry out the study to the effect required as it helps in providing the best reproductive health service for the target group. Your answers are very important and valuable to the successful completion of the study. **Please be honest** in filling this questionnaire, as it will be solely used for research purpose. **All information will be kept confidential and data will be analyzed in aggregates.** The result of the study will be disseminated to all potential stakeholders for possible intervention. The information obtained is meant to benefit society.

Please, mark “X” in the box or write your answer accordingly and multiple answers are possible where appropriate.

Are you willing to participate? Yes No

If you have any questions or comments please feel free to contact the principal investigator, **Gizaw Thomas** (Mobile: 0913271716; e-mail: gizoyee@yahoo.com).

Data Collector

Name _____ Signature _____ Date _____

Supervisor

Name _____ Signature _____ Date _____

PART- I: Sociodemographic background of respondents

Q.No	Questions	Response	Skip to
001	How old are you?	Age in completed Years_____	
002	Which region did you come from?	_____	
003	What is your religion	Orthodox <input type="checkbox"/> Muslim <input type="checkbox"/> Catholic <input type="checkbox"/> Protestant <input type="checkbox"/> Other, Specify_____	
004	Department of the study you are attending?	_____	
005	Level of education?	Year I <input type="checkbox"/> Year II <input type="checkbox"/> Year III <input type="checkbox"/> Year IV <input type="checkbox"/> Year V <input type="checkbox"/>	
006	Your current marital status?	Married <input type="checkbox"/> Single without relationship <input type="checkbox"/> Single with relationship <input type="checkbox"/> Divorced <input type="checkbox"/> Widowed <input type="checkbox"/> Other, Specify_____	
007	Where do you live?	In the campus dormitory <input type="checkbox"/> Outside the campus <input type="checkbox"/>	If in campus go to 009
008	If you are living outside the campus, with	With my family <input type="checkbox"/>	

	whom are you living?	With my relatives <input type="checkbox"/> With my boyfriend <input type="checkbox"/> With my husband <input type="checkbox"/> With my friends <input type="checkbox"/> Alone <input type="checkbox"/> Other, Specify _____	
PART- II: Sociodemographic background of parents			
009	What is the educational status of your mother?	Illiterate <input type="checkbox"/> Primary education <input type="checkbox"/> Secondary education <input type="checkbox"/> Above secondary school <input type="checkbox"/>	
010	What is your mother's Job?	Day laborer <input type="checkbox"/> Housemaid <input type="checkbox"/> Housewife <input type="checkbox"/> Government employee <input type="checkbox"/> Private employee <input type="checkbox"/> Merchant <input type="checkbox"/> Jobless <input type="checkbox"/> Retired <input type="checkbox"/> self business <input type="checkbox"/> Other, specify _____	
011	What is the educational status of your father?	Illiterate <input type="checkbox"/> Primary education <input type="checkbox"/> Secondary education <input type="checkbox"/> Above secondary school <input type="checkbox"/>	

012	What is your father's Job?	Day laborer <input type="checkbox"/> Government employee <input type="checkbox"/> Private employee <input type="checkbox"/> Merchant <input type="checkbox"/> Jobless <input type="checkbox"/> Retired <input type="checkbox"/> self business <input type="checkbox"/> Other, specify _____	
013	Is there anyone who has medical related profession in your parents?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Part III: Knowledge of Medication/Medical Abortion			
014	What is the possible outcome of pregnancy? (more than one answer is possible)	Giving birth <input type="checkbox"/> Abortion <input type="checkbox"/> Other (specify) _____	
015	Have you ever heard about abortion?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no skip to 018
016	If yes, from what source did you get the information? (more than one answer is possible)	Friends <input type="checkbox"/> Media <input type="checkbox"/> Family <input type="checkbox"/> Teacher <input type="checkbox"/> Church <input type="checkbox"/> Conference <input type="checkbox"/> Other sources, specify) _____	
017	Which ways of performing abortion do you know? (more than one answer is	Abortion by Surgical procedures <input type="checkbox"/> Abortion by medication /drugs <input type="checkbox"/>	

	possible)	Abortion by traditional practitioners <input type="checkbox"/> I do not know <input type="checkbox"/> Others (specify) _____	
018	Do you know what safe abortion means?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 020
019	If yes, what does it mean? (more than one answer is possible)	<input type="checkbox"/> When induced abortion is performed by qualified persons <input type="checkbox"/> When induced abortion is performed using correct techniques <input type="checkbox"/> When induced abortion is performed in sanitary condition <input type="checkbox"/> When induced abortion is performed by untrained persons Other, specify _____	
020	Do you know what unsafe abortion means?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 022
021	If yes, what does it mean? (more than one answer is possible)	<input type="checkbox"/> Termination of unwanted pregnancy by persons lacking the necessary skills <input type="checkbox"/> Termination of unwanted pregnancy in an environment lacking minimal medical standards <input type="checkbox"/> Termination of unwanted pregnancy by the woman herself <input type="checkbox"/> Termination of unwanted pregnancy by health worker under unhygienic condition Other, specify _____	
022	Do you know what a medication abortion means?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 029

023	If yes, what does it mean?	<input type="checkbox"/> Abortion using abortion pill/drug <input type="checkbox"/> Abortion using any drugs/medication <input type="checkbox"/> Abortion by inserting objects through female genital <input type="checkbox"/> Abortion by drinking chemicals Other, specify _____	
024	Where did you get information about medication abortion from? (more than one answer is possible)	Friends <input type="checkbox"/> Radio <input type="checkbox"/> Family <input type="checkbox"/> Teacher <input type="checkbox"/> Church <input type="checkbox"/> Conference <input type="checkbox"/> Other sources, specify) _____	
025	Do you know where someone can have medication abortion done?	Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure <input type="checkbox"/>	If no go to 027
026	If yes to the above question, from where? (more than one answer is possible)	Community Pharmacy <input type="checkbox"/> Hospital pharmacy <input type="checkbox"/> Health center <input type="checkbox"/> Private clinic <input type="checkbox"/> Other, specify _____	
027	Which drug/drugs is/are used to abort pregnancy? (more than one answer is possible)	Misoprostol <input type="checkbox"/> Mifiprostol <input type="checkbox"/> Amoxicillin <input type="checkbox"/> Ampicillin <input type="checkbox"/>	

		Methotrixate <input type="checkbox"/> Gemprost <input type="checkbox"/> Medabon <input type="checkbox"/> Safe-T <input type="checkbox"/> I do not know <input type="checkbox"/> Other, specify _____	
028	At what gestational age medication abortion preferable? (more than one answer is possible)	Gestational age \leq 63 days <input type="checkbox"/> Gestational age \leq 9 weeks <input type="checkbox"/> Gestational age \geq 9 weeks <input type="checkbox"/> At any gestational age <input type="checkbox"/> I do not know <input type="checkbox"/> Other, specify _____	
029	Is abortion legally allowed in Ethiopia?	Yes <input type="checkbox"/> No <input type="checkbox"/> Unsure <input type="checkbox"/>	If no go to 031
030	If yes to the above question at what condition? (more than one answer is possible)	<input type="checkbox"/> When the pregnancy is resulted from rape or incest, <input type="checkbox"/> When the woman's or fetus' lives are threatened, <input type="checkbox"/> When the fetus has severe abnormalities, <input type="checkbox"/> When the woman has physical or mental disabilities <input type="checkbox"/> When a woman is physically or psychologically unprepared to raise a child <input type="checkbox"/> On request for everyone Other specify, _____	

Part III: Attitude towards Medication/Medical Abortion

031	Do you support that government should allow abortion in this country?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 032
032	If yes, what is your reason? (more than one answer is possible)	<input type="checkbox"/> to prevent unsafe abortion <input type="checkbox"/> to prevent the death of women due to unsafe abortion <input type="checkbox"/> it is human right Other specify, _____	
033	If no, what is your reason? (more than one answer is possible)	<input type="checkbox"/> not allowed in my religion <input type="checkbox"/> it is crime <input type="checkbox"/> it encourages many women to have unplanned pregnancy <input type="checkbox"/> it will risk the health of women Other, specify _____	
034	Would you advise or encourage a colleague with an unwanted pregnancy to undergo an abortion?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 035
035	If yes, which type?	Abortion by Surgical procedures <input type="checkbox"/> Abortion by medication /drugs <input type="checkbox"/> Abortion by traditional practitioners <input type="checkbox"/> Others (specify) _____	
036	If you have unplanned pregnancy will you consider using abortion as a means of terminating it?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no go to 038
037	If yes why? (more than one answer is possible)	I cannot raise the child <input type="checkbox"/> It will affect my education <input type="checkbox"/> To protect social stigma <input type="checkbox"/>	

		Others (specify) _____	
038	If you consider abortion, which type would you use?	<input type="checkbox"/> Abortion by Surgical procedures in the health facility <input type="checkbox"/> Abortion by medication /drugs from health facility <input type="checkbox"/> Abortion by medication /drugs from friends <input type="checkbox"/> Abortion by traditional practitioners Others (specify) _____	
039	If no why? (more than one answer is possible)	My religion cannot allow abortion <input type="checkbox"/> It is crime in our country <input type="checkbox"/> I don't want to kill my own baby <input type="checkbox"/> Others (specify) _____	

Part IV: Practice of Medical/Medication Abortion

040	Have you ever had sexual intercourse before?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no stop
041	If yes, was there any incidence of pregnancy?	Yes <input type="checkbox"/> No <input type="checkbox"/>	If no stop
042	If yes, what action did you take?	Gave birth <input type="checkbox"/> Undergone abortion <input type="checkbox"/> It was terminated spontaneously <input type="checkbox"/> Other (please specify)_____	If 1 or 3 stop
043	If you have undergone abortion; which type of procedure did you use?	Abortion by Surgical procedures <input type="checkbox"/> Abortion by medication /drugs <input type="checkbox"/> Abortion by traditional practitioners <input type="checkbox"/> Others (specify) _____	
044	What is the reason for your choice of abortion method? (more than one answer	It is safe <input type="checkbox"/> It doesn't have side effect <input type="checkbox"/>	

	is possible)	It is easy to take <input type="checkbox"/> has low continuing pregnancy <input type="checkbox"/> it is more natural <input type="checkbox"/> avoids surgery and anesthesia <input type="checkbox"/> more effective <input type="checkbox"/> increased privacy and confidentiality <input type="checkbox"/> Much quicker in a short period of time <input type="checkbox"/> Others (specify) _____	
--	--------------	--	--

Thank you for your time!!!

III. Interview Guide/ English

A. Interview guide for health workers in the sidist kilo campus student clinic concerning the provision of medication abortion (MA)

1. Have you encountered students seeking help after being pregnant? What kind of help did they need most of the time? From which college students need such kind of help? Have you encountered students from college of social science for such kind of help? What do they need? At what age group does your most of clients are belonging? For what reasons that most of your clients ask for abortion?
2. Do you know about medical abortion? Do you provide MA service? Did you take any training on MA? What are the recommended doses by government of Ethiopia for MA? How many doses generally you recommend to the women seeking abortion MA? Up to how many weeks of the pregnancy do you use MA? On average, how many MA do you do in a month?
3. Are abortion methods and equipments are available sufficiently in your institution? If so what is your source and how is the continuity of the supply? Which type of abortion methods is used mostly? Who provide the service of abortion in your institutions? When does the service of abortion provided?
4. Have you experienced complication while providing MA? What type of complications generally you have experienced in providing MA? Do you treat these complications in your clinic or send them to any other doctor? Do you advise contraception to women accepting MA? How many cases of complication have you seen/observed with MA drugs?
5. Does the institution take any effort to create awareness on MA among clients? If No, why? What should be done to enhance the service?

B. Interview Guide for student counselors in the sidist kilo campus concerning the provision of medication abortion (MA)

1. How do you see the occurrence of unwanted pregnancies in regular undergraduate female students in the campus?
 - Who are most vulnerable/socio-demographic characters? What are major reasons/factors? How do you see their awareness regarding utilization of MA?
2. What are activities being implemented creating awareness on utilization of MA?

IV. Interview Guide/ Amharic

በ ስድስት ኪሎ ካምፓስ የተማሪዎች ክልኒክ ለሚሰሩ የጤና ሰራተኞች በመድሃኒት ብቻ ስለሚሰጥ ወርጃ የተዘጋጀ የቃለ መጠይቅ ቅፅ

ጥያቄ አንድ: አጠቃላይ ጥያቄ

1. በእርግዝና ምክኒያት እርዳታ ፈልገው የመጡ ተማሪዎች ኢጋጥምዎት ያወቃል?;
2. ብዙ ጊዜ ምን አይነት እርዳታ ነው የሚፈልጉት?;
3. የየትኛው ኮሌጅ ተማሪዎች ናቸው ከላይ የጠቀሱትን እርዳታ ብዙ ጊዜ የሚፈልጉት?;
4. ከሶሻል ሳይንስ ኮሌጅ እርዳታውን ፈልገው የመጡ ተማሪዎች ኢጋጥምዎት ያወቃል?;
5. ምንድነው የሚፈልጉት?;
6. እርዳታውን ፈልገው ከሚመጡት ውስጥ አብዛኛዎቹ በየትኛው የእድሜ ክልል ውስጥ የሚገኙ ተማሪዎች ናቸው?;
7. አብዛኛዎቹ ወርጃ የሚፈልጉት በምን ምክኒያት ነው?;

ጥያቄ ሁለት: ወርጃን በተመለከተ

1. የወርጃው ስም ስንት ነው?;
2. የወርጃው ዓይነት ስንት ነው?;
3. በመድሃኒት ብቻ ስለሚሰጥ ወርጃ ያወቃሉ?;
4. እርስዎ በሚሰሩበት ክልኒክ ውስጥ በመድሃኒት ብቻ የሚሰጥ የወርጃ አገልግሎት ይሰጣል?;
5. በመድሃኒት ብቻ ስለሚሰጥ ወርጃ ስልጠና ወስደዋል?;
6. ኢትዮጵያ ውስጥ ለአገልግሎቱ የተፈቀደው የመድሃኒት መጠን ምን ያህል ነው?;
7. እስከ ስንተኛው የእርግዝና ሳምንት ድረስ ነው በመድሃኒት ብቻ የወርጃ አገልግሎት የሚሰጠው?;
8. በአማካኝ በወር ውስጥ ምን ያህል በመድሃኒት ብቻ የወርጃ አገልግሎት ይሰጣሉ?;

ጥያቄ ሦስት: የወርጃ ስልጠና ደረጃን አቅርቦትን ለማሳደግ

1. የተለያዩ የወርጃ መሳሪያዎችና መንገዶች እርስዎ በሚሰሩበት ክልኒክ ውስጥ በበቂ ሁኔታ ይገኛሉ?;
2. በበቂ ሁኔታ ከተገኙ ከየት ነው የሚያገኙባቸው? ቀጣይነቱስ እንዴት ነው?;
3. የትኛውን የወርጃ መንግድ ነው አብዛኛዎቹ ተማሪዎች በብዛት የሚጠቀሙት?;
4. ማንኛው አገልግሎቱን የሚሰጠው?;
5. መቻሉ ነው አገልግሎቱ የሚሰጠው?;

ጥያቄ አራት: ለወርጃው የሚሰጠው የሥራ ደረጃ የሚከሰቱ ችግሮች

1. አገልግሎቱን በሚሰጡበት ወቅት ከአገልግሎቱ ጋር ተያይዞ የሚመጡ ችግሮች የተከሰተባት ተማሪ ኢጋጥምዎት ያወቃል?;

2. በአጠቃላይ አገልግሎቱን በሚሰጡበት ወቅት ከአገልግሎቱ ጋር ተያይዘው የሚመጡ ምን ዓይነት ችግሮች አጋጥመዎት ያውቃል;
3. እነዚህ ችግሮች በሚከሰቱበት ወቅት ተማሪዎቹን እርስዎ በሚሰሩበት ክልረክ ውስጥ ያከሟቸዋል ወይስ ወደ ሌላ ሐኪም ይልኩታል;
4. በመድሃኒት ብቻ የሚሰጥ የወርጃ አገልግሎት ለሚያገኙት ተማሪዎች ስለ ውሊድ መቆጣጠሪያ የምክር አገልግሎት ይሰጧቸዋል;
5. ለአገልግሎቱ ከምንጠቀማቸው መድሃኒቶች ጋር ተያይዘው የሚመጡ ችግሮች ምን ያክል ጊዜ አጋጥመዎት ያውቃል;

ጥያቄ አምስት: uS ድሃነት wቻ eKTጽጥ የውርጃ አገልግሎት የተሰጠ የግንዛቤ Se

1. እርስዎ የሚሰሩበት ተቋም ውስጥ በመድሃኒት ብቻ የሚሰጥ የወርጃ አገልግሎት ለሚያገኙት ተማሪዎች ስለ አገልግሎቱ ግንዛቤ ለመፍጠር የሚደረግ ጥረት አለ?
2. ከሌለ ለምን?
3. አገልግሎቱን ለማጠናከር ምን መደረግ አለበት ይላሉ;

በ ስድስት ኪሎ ካምፓስ ለሚሰሩ የተማሪ አማካሪዎች በመድሃኒት ብቻ ስለሚሰጥ የወርጃ አገልግሎት የተዘጋጀ የቃለ መጠይቅ ቅጽ 1

1. በመደበኛ ትምህርት ላይ ባሉ ሴት ተማሪዎች ላይ የሚከሰት ያልተፈለገ እርግዝናን እንዴት ይመለከቱታል;
2. ለችግሩ ተጋላጮች በአብዛኛው የትኞቹ ሴት ተማሪዎች ናቸው;
3. ዋና ዋና ምክንያቶቹ ምንድናቸው;
4. የተማሪዎቹን በመድሃኒት ብቻ የሚሰጥ የወርጃ አገልግሎት የመጠቀም ግንዛቤ እንዴት ይመለከቱታል?;
5. በመድሃኒት ብቻ የሚሰጥ የወርጃ አገልግሎትን ተማሪዎች እንዲጠቀሙ ግንዛቤ ለመፍጠር ምን እየተደረገ ነው;

V. Distribution of study participants in respective departments

Departments	Expected number of students	Participated in the research	Data analyzed from
Archeology	Year I= 5	Year I= 3	Year I= 3
	Year II= 8	Year II= 7	Year II= 6
	Year III= 3	Year III= 3	Year III= 3
Geography and environmental science	Year II= 11	Year II= 10	Year II= 10
	Year III= 4	Year III= 3	Year III= 3
History	Year II= 1	Year II= 1	Year II= 1
	Year III= 3	Year III= 3	Year III= 3
Philosophy	Year II= 6	Year II= 5	Year II= 5
	Year III= 4	Year III= 3	Year III= 3
Political science and International relation	Year I= 16	Year I= 14	Year I= 13
	Year II= 14	Year II= 13	Year II= 13
	Year III= 13	Year III= 11	Year III= 11
	Year IV= 4	Year IV= 4	Year IV= 4
Social Anthropology	Year I= 14	Year I= 14	Year I= 14
	Year II= 16	Year II= 14	Year II= 14
	Year III= 10	Year III= 8	Year III= 8
Sociology	Year I= 27	Year I= 24	Year I= 23
	Year II= 21	Year II= 18	Year II= 16
	Year III= 16	Year III= 15	Year III= 14
Social Work	Year I= 2	Year I= 2	Year I= 2
	Year II= 16	Year II= 15	Year II= 13
	Year III= 16	Year III= 14	Year III= 14
	Year IV= 17	Year IV= 16	Year IV= 15
Total	<u>247</u>	<u>222</u>	<u>213</u>