

**ADDIS ABABA UNIVERSITY  
COLLEGE OF HEALTH SCIENCES  
SCHOOL OF ALLIED HEALTH SCIENCES  
DEPARTMENT OF NURSING AND MIDWIFERY**

**PREVALENCE OF UNSAFE ABORTION AND ASSOCIATED FACTORS AMONG  
WOMEN ATTENDING THE MATERNAL AND CHILD HEALTH UNITS OF  
PUBLIC HEALTH CENTERS IN ADDIS ABABA, ETHIOPIA**

**BY: SELAMAWIT MULUGETA (B.Sc.)**

**A THESIS SUBMITTED TO ADDIS ABABA UNIVERSITY, COLLEGE OF  
HEALTH SCIENCES, SCHOOL OF ALLIED HEALTH SCIENCES DEPARTMENT  
OF NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE  
REQUIREMENT FOR THE DEGREE OF MASTER'S IN MATERNITY AND  
REPRODUCTIVE HEALTH NURSING**

**FEBRUARY, 2017**

**ADDIS ABABA, ETHIOPIA**

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**Abstract**

**Background;** unsafe abortion in Ethiopia has long been recognized as among a leading cause of deaths and injuries to women. However there is limited scientific information available on the women who seek unsafe abortion, factors which may be a cause for unsafe abortion.

**Objectives;** The objective was to assess the prevalence of unsafe abortion and associated risk factors among women attending maternal and child health units in public health centers in Addis Ababa.

**Methods;** Institution based cross sectional study design was employed among 422 women attending maternal and child health unit of selected health centres between September to October 2016 in Addis Ababa A structured interviewer administered questionnaire was used. The collected data was entered using Epi data 3.0 and analyzed using IBM Statistical Package for Social Sciences version 20.0. Descriptive statistics was used to describe the study variables. Logistic regression analysis was used to assess the relative effect of determinants. A  $P < 0.05$  was considered statistically significant.

**Results;** About 422 women invited to participate and asked for consent. About 20 excluded due to incomplete responses and refusal yielding 95.3% response rate. Among who have ever been pregnant (279), about 114(31%) had abortions in their life, of these, unsafe abortion was reported by 30 women (26%). Regarding the independent predictors, those who have completed primary education and above were about 10 times less likely in comparison with those women whose educational status was below primary level, in comparison with those women who replied abortion is legal, those who said it is allowed only in some cases were about 7 times more likely and those who replied not sure about its legalization were more than 8 times more likely , compared with those women who have no live child currently; those mothers who have more than 3 children and 1- 2 children were about ninety seven and twelve times more likely to have unsafe abortion.

**Conclusion;** Unsafe abortion is found to be high in Addis Ababa. Factors which include maternal educational status, knowledge regarding the legalization status of abortion in Ethiopia, number of pregnancy and number of live children were found to be determinants of unsafe abortion. Hence, health education regarding unwanted pregnancy, disseminating information regarding the legal status of abortion as well as educating women is recommended.

**Key words;** unsafe abortion, prevalence, risk factors

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**List of acronyms and abbreviations**

**AOR:** Adjusted Odds Ratio

**CI:** Confidence Interval

**CSA:** Central Statistical Authority

**DHS:** Demographic and Health Survey

**MCH:** Maternal and Child Health Unit

**MDG:** Millennium Development Goals

**MMR:** Maternal Mortality Ratio

**NGO:** Non-Governmental Organization.

**OR:** Odds Ratio

**PAC:** Post Abortion Care.

**SDG:** Sustainable Development Goal

**WHO:** World Health Organization.

# **1. Introduction**

## **1.1. Background**

The World Health Organization (WHO) defines unsafe abortion as a procedure for terminating a pregnancy performed by persons lacking the necessary skills or in an environment not in conformity with minimal medical standards, or both (1).

Unsafe abortion and related factors have been the most dominant challenges which affect maternal mortality and morbidity in the world. Even though rates of induced abortion are difficult to measure because of frequent underreporting or misclassification in surveys, hospital records and health statistics (2), the WHO estimates nearly 5.5 million African women have an unsafe abortion every year. As many as 36,000 of these women die from the procedure, while millions more experience short or long term illness and disability (2).

Unsafe abortion also remains a reality for many Ethiopian women and may remain so until safe abortion is more accessible across the country. In 2008, an estimated 382,500 induced abortions were performed in Ethiopia, for an annual rate of 23 abortions per 1,000 women aged 15–44 which is relatively low compared with WHO estimates for Africa and Eastern Africa—29 and 39 per 1,000, respectively (3). The abortion rate is considerably higher than the national average in urban areas: 49 per 1,000 in Addis Ababa, the country's most urban and economically developed region, and 184 per 1,000 in the smaller urban regions of Dire Dawa and Harari in which the high abortion rates in these urban areas might be likely the result of many factors, including that the availability of private health care providers in these commercial centers draws women from surrounding areas. Some 35% of women obtaining induced abortions and 27% of those obtaining post abortion care report having had a previous abortion (3).

The immediate determinants of the risks of an induced abortion, such as the termination method used and gestational age, are influenced, in turn, by underlying social determinants: including the legal context, the availability of safe abortion services, the level of stigma surrounding abortion, the degree of women's access to information on abortion, and a woman's age and socioeconomic status (1).

The legal context and the level of safety are closely intertwined, but the association is context-specific. For example, where restrictive laws are liberally interpreted, women can receive safe care in certain contexts; conversely, where liberal laws are poorly implemented, women some-times abort with delay and under unsafe conditions. Thus, illegal abortion is not synonymous with unsafe

abortion, as indicated by the original definition: “legality or illegality of services, however, may not be the defining factor of their safety the safety of abortion must be considered within both the legal and legally restricted contexts” (1).

## **1.2. Statement of the problem**

Death from unsafe abortion accounts a significant proportion of global maternal mortality. Hundreds of thousands of women are still dying at the end of Millennium development goals (MDG) due to complications of pregnancy and/or childbirth each year. From the globally estimated maternal deaths developing regions including Ethiopia account for approximately 99% (302,000) of the estimated global maternal deaths in 2015 with Sub - Saharan Africa alone accounting for roughly 66% (201,000) (4). At the end of 2015, Ethiopia was included among 10 countries which account for nearly 59% of global maternal deaths ranking 4<sup>th</sup> next to Nigeria 58,000(19%), India 45,000 (15%) and Democratic Republic of the Congo 22,000(7.2%) with 11,000(3.6%) maternal deaths (4).

Worldwide, about 80% of maternal deaths are due to causes directly related to pregnancy and childbirth in which the major causes of maternal mortality were hemorrhage (24%), infection (15%), unsafe abortion (13%), prolonged labor (12%) and eclampsia (12%) whereas primary causes of maternal mortality in Africa are hemorrhage(34%), other direct causes (17%), infection (10%), hypertensive disorders (9%) and obstructed labor (4%), abortion (4%) and anemia (4%) (5) (6).

In Ethiopia, Even though the routine monitoring of abortion-related morbidity and mortality is poor it is estimated that one in seven women die from pregnancy-related causes, and unsafe abortion causes more than half of the 20,000 maternal deaths that occur annually. For much of Ethiopia’s modern history, safe abortion services were unavailable. In fact, abortion was only allowed when it physically put the woman’s life at risk. Motivated by the growing death toll from unsafe abortion and other related causes, advocates, providers and policymakers sought legal reform. By considering the severity of unsafe abortion, the Ethiopian Parliament amended the penal code on abortion in 2004. The new law states that abortion can be performed legally in cases of rape or incest, if the woman has physical or mental disabilities, if it is needed to preserve the woman’s life or her physical health, or if she is a minor who is physically or mentally unprepared for childbirth (7).

In a literature review which includes 19 health facility-based studies from Ethiopia, which were reported between 1980 and 2012, showed that abortions were among the top four causes of

maternal mortality in the year 1980-1999 in which abortion related complications accounted for 31% of maternal deaths (8).

Majority of maternal deaths are due to preventable or treatable causes. Even though the proportion of maternal death ascribed to the different causes varies from year to year the major causes of maternal deaths in Ethiopia were similar to most developing countries which include infection, hemorrhage, obstructed labor, abortion and hypertension in pregnancy (9).

Twenty-three percent of all women seeking post abortion care suffered complications severe enough to require hospitalization. Ethiopian health professionals estimate that 58% of all women who have an abortion experience serious complications and that only about a quarter of these women (or about 14% of all women who have an abortion) receive treatment for these complications. The remaining 42% do not have complications that require medical care. The rate of complications treated in facilities in urban areas is substantially higher than the national average. These higher rates can be attributed to several factors, including better access to health facilities and the fact that women from rural areas may travel to urban centers to obtain post abortion care. In particular, access must be improved for rural women, who represent 82% of all women of reproductive age. They are more likely than urban women to have unsafe abortions and to experience serious complications as a result (3). In Ethiopia in 2008, an estimated 52,600 women received care in a health facility for complications of unsafe abortion. One hundred women die in Ethiopian health facilities each year from abortion-related complications, but many more suffer from injuries or illness related to unsafe procedures. Four out of 10 women seeking post abortion care show signs of infection or invasive injuries when they arrive at a health facility (3).

Although unsafe abortion in Ethiopia has long been recognized as among a leading cause of deaths and injuries to women - deaths and injuries that are preventable, there is limited scientific information available on the women who seek unsafe abortion, the factors which may be a possible cause of unsafe abortion. Hence, this study was undertaken to assess the prevalence of unsafe abortion and its associated factors among women attending MCH units of public health centers in Addis Ababa, Ethiopia.

### **1.3. Significance of the study**

In the assessment of MDG 5 outcomes among those 95 countries Ethiopia was placed in the second category among those countries that are “making progress” with an estimated MMR reduction of 50% or more and the 9 countries with an estimated MMR reduction between 1990 and 2015 of 75% or more have “achieved MDG 5” have been placed in the first category (4). Globally, the MMR fell by nearly 44% over the past 25 years, to an estimated 216 maternal deaths per 100,000 live births in 2015, from an MMR of 385 in 1990. The annual number of maternal deaths was also decreased by 43% from approximately 532,000 in 1990 to an estimated 303,000 in 2015 (4).

Working towards Sustainable Development Goal (SDG) 3.1 in which by 2030, reduce the global MMR to less than 70 per 100,000 live births and ultimately toward sending preventable maternal mortality requires amplifying the efforts and progress catalyzed by MDG 5, unsafe abortion which is believed to contribute to the failure of this plan, in Addis Ababa was higher than the national average (49 per 1,000 in Addis Ababa) (3) which is still high.

The finding of this study could help to understand the prevalence of unsafe abortion and its associated factors and reveals area for further study and will assist policy makers, health care professionals, health extension workers, community health promoter and other concerned bodies to understand the situation in the study area and may help them to prioritize and focus their efforts. Additionally, since there is a limited research in the study area, this study can be used as a benchmark for further studies.

## **2. Literature review**

### **2.1. Unsafe abortion incidence and mortality**

Unsafe abortion is defined by the World Health Organization (WHO) as a procedure for terminating an unintended pregnancy carried out either by persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both (1).

When women want to limit or postpone childbearing, but contraception is not used or used ineffectively or they are forced into nonconsensual sex, unintended pregnancies occur: some are terminated by induced abortions while others result in unwanted births. Where abortion laws are restricted or safe abortion services are not widely accessible or are of poor quality, women resort to unskilled providers, risking serious consequences to their health and well-being (2).

It is estimated that of the 210 million pregnancies that occur each year. Some 80 million are unintended. In 2008, 21.6 million unsafe abortions were estimated to have occurred, causing the deaths of 47 000 women (2).

It is difficult to obtain reliable information on its prevalence and to assess the magnitude of the morbidity and mortality associated with unsafe abortion. Hence, different studies have been conducted to determine the prevalence of induced abortion in general and unsafe abortion in particular in different parts of the world.

Among those studies, a study done in Ballabgarh showed that of the 11,102 pregnancies, 1,226 (11 %) culminated as abortions of which 425 (3.8 %) were induced abortions (10). In a literature review of studies done in Brazil from 1996-2012, a total of 4,007,327 hospital admissions due to abortions were recorded. This study estimated a total of 16,905,911 unsafe abortions in the country, with an annual mean of 994,465 abortions (mean unsafe abortion rate: 17.0 abortions/1,000 women of childbearing age; ratio of unsafe abortions: 33.2/100 live births). Unsafe abortion presented a declining trend at national level, with unequal patterns between regions. Spatial analysis identified the presence of clusters of municipalities with high values for unsafe abortion, located mainly in states of the North, Northeast and Southeast Regions (11).

An estimated 464,690 induced abortions occurred in Kenya in 2012, corresponding to an induced abortion rate of 48 abortions per 1000 women of reproductive age (15-49 years), and an induced abortion ratio of 30 abortions per 100 births in 2012 (12).

The global estimates of incidence of and mortality due to unsafe abortion in 2008 are summarized in Table 1 below (13).

**Table 1: The global estimates of incidence and mortality due to unsafe abortion in 2008**

	<b>Number of unsafe abortions (rounded)</b>	<b>Number of maternal deaths due to unsafe abortion (rounded)</b>	<b>% of maternal deaths due to unsafe abortion</b>
<b>World</b>	<b>21 600 000</b>	47 000	13
Developed regions†	360 000	90	4
Developing regions	21 200 000	46 800	13
Least developed countries	4 990 000	23 200	14
Sub-Saharan Africa	5 510 000	28 600	14
<b>Africa</b>	<b>6 190 000</b>	29 000	14
Eastern Africa	2 430 000	13 000	18
Middle Africa	930 000	4400	12
Northern Africa	900 000	1500	12
Southern Africa	120 000	500	9
Western Africa	1 810 000	9700	12
<b>Asia†</b>	<b>10 780 000</b>	<b>17 000</b>	12
South-central Asia	6 820 000	14 000	13
South-Eastern Asia	3 130 000	2300	13
Western Asia	830 000	600	16
<b>Europe</b>	<b>360 000</b>	90	8
Eastern Europe	360 000	90	11
<b>Latin America and the Caribbean</b>	<b>4 230 000</b>	1100	12
Caribbean	170 000	100	11
Central America	1 070 000	200	9
South America	2 990 000	700	13
<b>Oceania†</b>	<b>18 000</b>	<b>100</b>	<b>12</b>

†Japan, Australia and New Zealand have been excluded from the regional estimates, but are included in the total for developed countries.

Very few studies which were conducted in Ethiopia address abortion directly or indirectly. Among the handful studies, one study estimated the prevalence of induced abortion and found that in 2008, an estimated 382,000 induced abortions were performed in Ethiopia, and 52,600 women were treated for complications of such abortions. There were an estimated 103,000 legal procedures in health facilities nationwide, 27% of all abortions. Nationally, the annual abortion rate was 23 per 1,000 women aged 15–44, and the abortion ratio was 13 per 100 live births. The abortion rate in Addis Ababa (49 per 1,000 women) was twice the national level. Overall, about 42% of pregnancies were unintended and the unintended pregnancy rate was 101 per 1,000 women (3).

In a study done in Batu town, Ethiopia abortion was reported by 87(25.6%) from those who were ever pregnant women in the last six years. Out of those women 33(37.9%) of them had their abortion at gestational age above three months (14). A study in Gurage Zone, Ethiopia also showed that among those who admitted interference to the current pregnancy reported place of interference as health institutions, patient's home, and inducer's house, 25 (51%), 22 (45%), and 2 (4%), respectively. Materials used to induce abortion were herbs, 18 (36.7%); plastics, 15 (30.6%); and different medications in 11 (22.4%) of the patients. Twenty (40.8%) reported that interference was done by themselves followed by health workers, 25 (51%) (15).

## **2.2. Factors associated with unsafe abortion**

### **2.2.1. Service availability and affordability and unmet need for family planning**

Women are likely to resort to an unsafe abortion when faced with an unplanned pregnancy and provisions for safe abortions are restricted, unavailable or inaccessible. Where abortions are highly restricted by law, abortions are mostly unsafe. An increase in the use of effective contraceptive methods results in reducing unintended pregnancies and, consequently, the incidence of abortion. It is estimated that three out of four induced abortions could be eliminated if the need for family planning were fully met by expanding and improving family planning services and choices (13).

Different factors may contribute for induced abortion especially unsafe abortion. Even where abortion is legal, millions of women across the world, especially young women, face barriers to access in which many women, especially adolescents and poor women cannot afford to access safe abortion, access to safe services may be geographically inaccessible and also limited by shortages of trained providers. In many societies, the stigma associated with abortion may discourage otherwise trained and capable doctors from providing safe abortion services, marginalized populations may face stigma and discrimination when attempting to seek safe abortion services, resulting in denial of care or required authorization by a third party even if not needed by law.

Additionally gestational limits, the need for parental or spousal consent, and mandatory waiting periods or counseling may also act as a barrier to accessing safe abortion services (16).

Confusion about the legality of abortion and whether it is legal for minors to engage in sexual intercourse can deter some adolescents from seeking safe abortion services, even if legal and available(17).

### **2.2.2. Socio-demographic, cultural and economic factors**

To investigate the associated factors for induced abortion many researchers have been conducted different surveys. In a national DHS study in India, at the national level, sex composition of living children, women's autonomy, urban residence, couple's education, and wealth status were found to be significantly associated with experience of induced abortion among women. However, the factors associated with induced abortion are found to be different in two distinct socio cultural set-ups in India. Although sex composition of living children and couple's education were the major factors for induced abortion in the northern group of states, wealth status and caste/tribe status were the major factors for the southern group of states (18).

In a study done in Ballabgarh self-reported reasons for opting for induced abortions were bleeding per vaginum (23 %), unwanted pregnancy (16 %), and unviable fetus diagnosed by ultra sonography (11 %). Eight percent of the induced abortions were due to the female sex of the fetus. About 11 % of the abortions were performed beyond 20 weeks of gestation which was the upper legal permissible gestational age for performing induced abortions in India. About 10 % of the abortions were performed by unqualified practitioners. Caste, wealth index, birth order and size of the village population were the factors that were significantly associated with induced abortion (10).

In a study done in Volta region, Ghana marital status, employment status, number of total pregnancies, and knowledge about contraception were found to be associated with induced abortion. Multiple logistic regression showed a 4% reduction in the odds of induced abortion in married women compared with women who were single (odds ratio [OR] 0.11, 95% confidence interval [CI] 0.07–0.22). Unemployed women of reproductive age were found to be 0.35 times less likely to seek induced abortion compared with their employed counterparts (OR 0.35, CI 0.19–0.65). Women with no knowledge of contraceptive methods were 4.6 times likely to seek induced abortion (OR 4.64, CI 1.39–15.4) (19).

Based on patient-specific data in national study in Kenya, women who sought abortion-related care were socially, demographically and economically heterogeneous. They included educated and uneducated women, urban and rural women, Christians, Muslims, and women of 'other faiths'; students, unemployed and employed women as well as married, never-married and divorced women. Based on the severity classification, about 23% of the women who presented for post-abortion care (PAC) presented with mild complications, 40% with moderately severe and 37% with severe complications (such as high fever, sepsis, shock, or organ failure) (12). Severe complications of unsafe abortions were most common among women aged 10-19 (45%), divorced women (56%), and women who reported to the provider that they had interfered with the continuation of the pregnancy (58%). More than 70% of women seeking post-abortion care were not using a method of contraception prior to becoming pregnant. Similarly the results of the 2008/09 Kenya DHS found that 43% of births in the preceding five years were reported by women as unwanted or mistimed (12).

Among studies conducted in Ethiopia, in a study done in Gurage Zone among the main reasons given for resorting to induced abortion by those who admitted interference were to complete education, 20 (40.8%), and for economic reasons, 18 (36.7%). In multivariate analysis, those patients who were in primary school and age group 30–34 were less likely to have induced abortion (AOR = 0.26, CI: (0.13–0.88)) and (AOR = 0.15, CI:(0.04–0.55)) (15).

In a study in Jimma in the multivariate analysis, having abortion in second trimester relative to having abortion in first trimester, were two times greater for women aged 19 years or younger compared to women aged 25+ years (OR = 2.64% CI: 1.23-5.68), six times higher for single women in comparison with married women (OR = 6.55% CI: 3.02-14.2), widowed or divorced women had 7 times (OR = 7.31;95% CI: 2.50-21.4), six times greater for women having education on primary school level or below compared to women who had education at secondary school level or above (OR: 6.07; 95% CI: 3.66-10.1), Women who were still attending school had in comparison with employed women, a two times (OR = 2.35; 95% CI: 1.10-5.00), unemployment was ten time increased (OR = 10.1; 95% CI: 2.92-35.0) (20).

### **2.2.3. Obstetric factors**

According to a study in India, independent of other factors, the likelihood of experiencing any reproductive health problems was 1.5 times higher (odds ratio, 1.46; 95 percent confidence interval, 1.33-1.60; P < .001) among women who had one induced abortion and 1.9 times higher (odds ratio,

1.85; 95 percent confidence interval, 1.52-2.27;  $P < .001$ ) among women who had two or more induced abortions compared with women with no history of induced abortion (18).

In a study done in Volta region, Ghana, it was observed that women with their second pregnancies were 3.8 times more likely to seek induced abortion and women with more than two pregnancies were 6.6 times more likely to do so (OR 3.81, CI 1.94–7.49 and OR 6.58, CI 2.58–16.79, respectively), compared with women who had not had induced abortion, women with a high number of pregnancies and no contraceptive knowledge were more likely to have induced abortion (19).

Among studies conducted in Ethiopia, in a study done in Gurage Zone, those patients who have greater than four pregnancies were more likely to have induced abortion than those who have less than four pregnancies (AOR = 4.28, CI = (1.24–14.71)) and those patients who reported that they want the current pregnancy were less likely to have induced abortion (AOR = 0.44, CI: (0.14–0.65)) than those who do not want their current pregnancy (15).

In a study done in Batu among the reasons around 27(79.4%) of induced abortion reported by the respondents were due to unwanted pregnancy, pre-marital pregnancy 11 (32.4%) and did not want more children 14(41.2%). After controlling for potential confounders women whose their last pregnancy were unwanted were about 7.9 times more likely to have an abortion than those women whose their last pregnancy were wanted (AOR [95% CI] =7.9[2.3, 26.8]). Similarly, women who had two and above births in the last six years were more likely to have an abortion compared to women who had one births in the last six years (AOR [95% CI] =4.9[2.3, 10.7]) (14)

In a study in Jimma, women who were nullipara had in comparison to women who were Para I-II, a more than twice increased (OR = 2.55; 95% CI 1.17-5.56). Women who were Para III or more had a seven times greater (OR: 7.09; 95% CI: 2.41-20.9) and being housewife seemed to be a protective factor for having second trimester abortion,(OR = 0.07; 95% CI: 0.01-0.56) (20).

### **2.3. Conceptual framework**

The next conceptual frame work depicts the relationship between the independent variables socio demographic factors, abortion law, knowledge and obstetric factors and the dependent variable unsafe abortion practice.

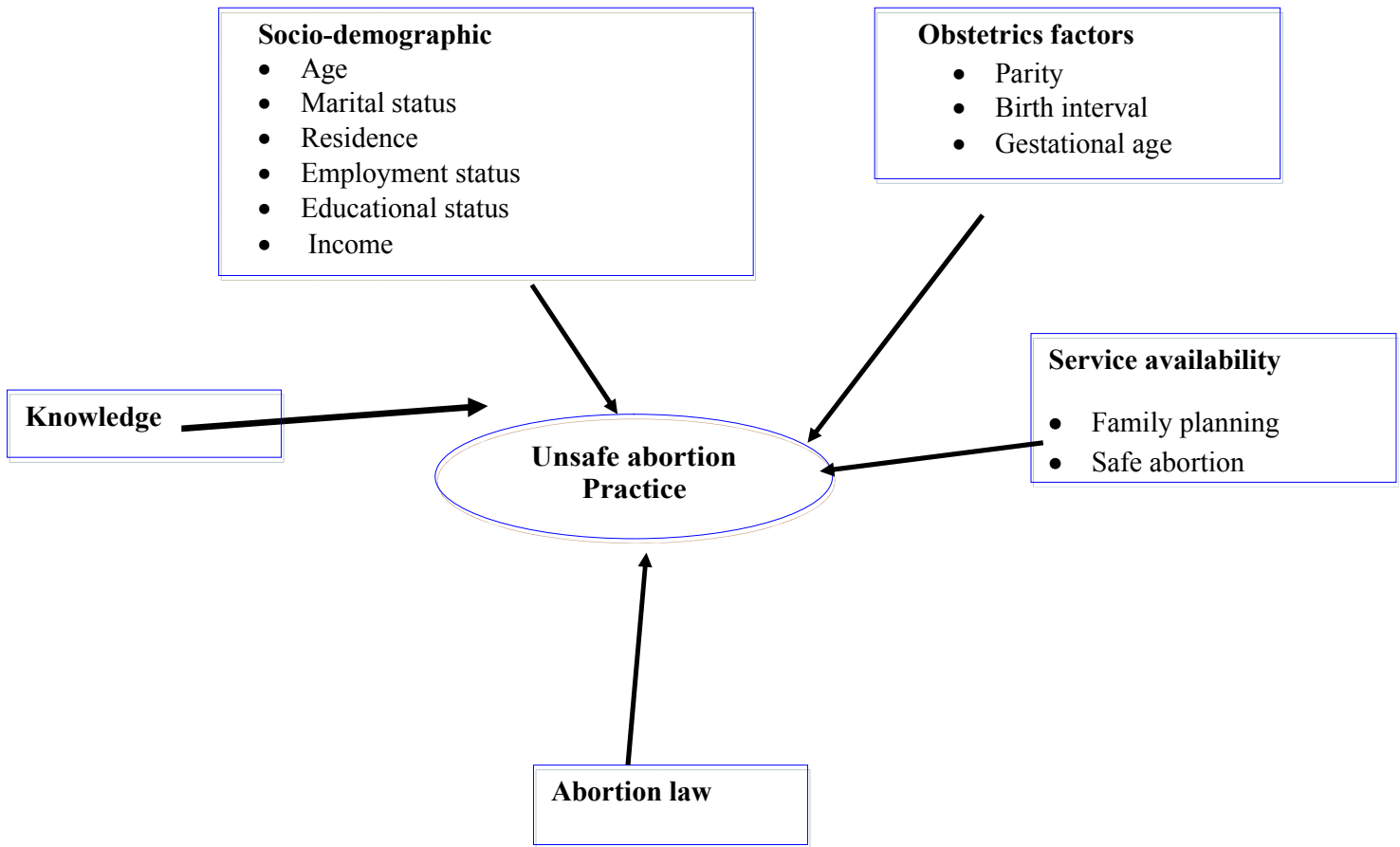


Figure 1: Conceptual framework showing the factors associated with unsafe abortion (adapted from review of literatures, (10),(12), (14), (15) , (18), (19), (20)).

### **3. Objectives of the study**

#### **3.1. General objective**

The general objective of this study was to assess the prevalence of unsafe abortion and associated factors among women attending maternal and child health units of public health centers in Addis Ababa, Ethiopia, 2016.

#### **3.2. Specific objectives**

- To assess the prevalence of unsafe abortion among women attending maternal and child health units of public health centers in Addis Ababa,2016
- To identify factors associated with unsafe abortion among women attending maternal and child health units of public health centers in Addis Ababa,2016

## **4. Methods and Materials**

### **4.1. Study Area and Period**

This study was conducted in government (public) health centers in Addis Ababa, Ethiopia from September- October /2016. According to census results and latest official projections, Addis Ababa have an estimated total population of 3,273,000 covering an estimated area of 526.99 square kilometers and an estimated density of 5,535.8 people per square kilometer at an altitude of about 2,300 meters (21).According to the health and health indicator data there were 62 public health centers and 11 hospitals (22) and the number of public health centers are about 90 in 10 sub cities of Addis Ababa.

### **4.2. Study Design**

Institution based cross sectional study design was implemented in public health centers found in Addis Ababa.

### **4.3. Population**

#### **4.3.1 .Source population**

All women attending MCH units of selected public health centers in Addis Ababa were the source population.

#### **4.3.2. Study population**

All sampled women who visited the selected health centers during the time of data collection were the study population.

### **4.4. Inclusion and exclusion criteria**

#### **4.4.1. Inclusion criteria**

Those women who have visited MCH clinics of selected health centers, women in the reproductive age group who have ever been pregnant, able to understand Amharic and had no other serious debilitating co morbidity was included.

#### **4.4.2. Exclusion criteria**

Women who haven't ever been pregnant and women with cognitive impairment which make the interview impossible were excluded from the study.

### **4.5. Sample size determination**

The sample size was determined considering the prevalence of unsafe abortion as 50% since there is no specific data concerning unsafe abortion an abortion rate. Giving any particular outcome to be within 5% marginal error and 95% confidence interval of certainty ( $\alpha = 0.05$ ). Based on this

assumption, the actual sample size for the study was computed using one- sample population proportion formula as indicated below.

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

Where, n= Sample size

$Z_{\frac{\alpha}{2}}$ = Critical value =1.96

P= percent of women who undergo unsafe abortion

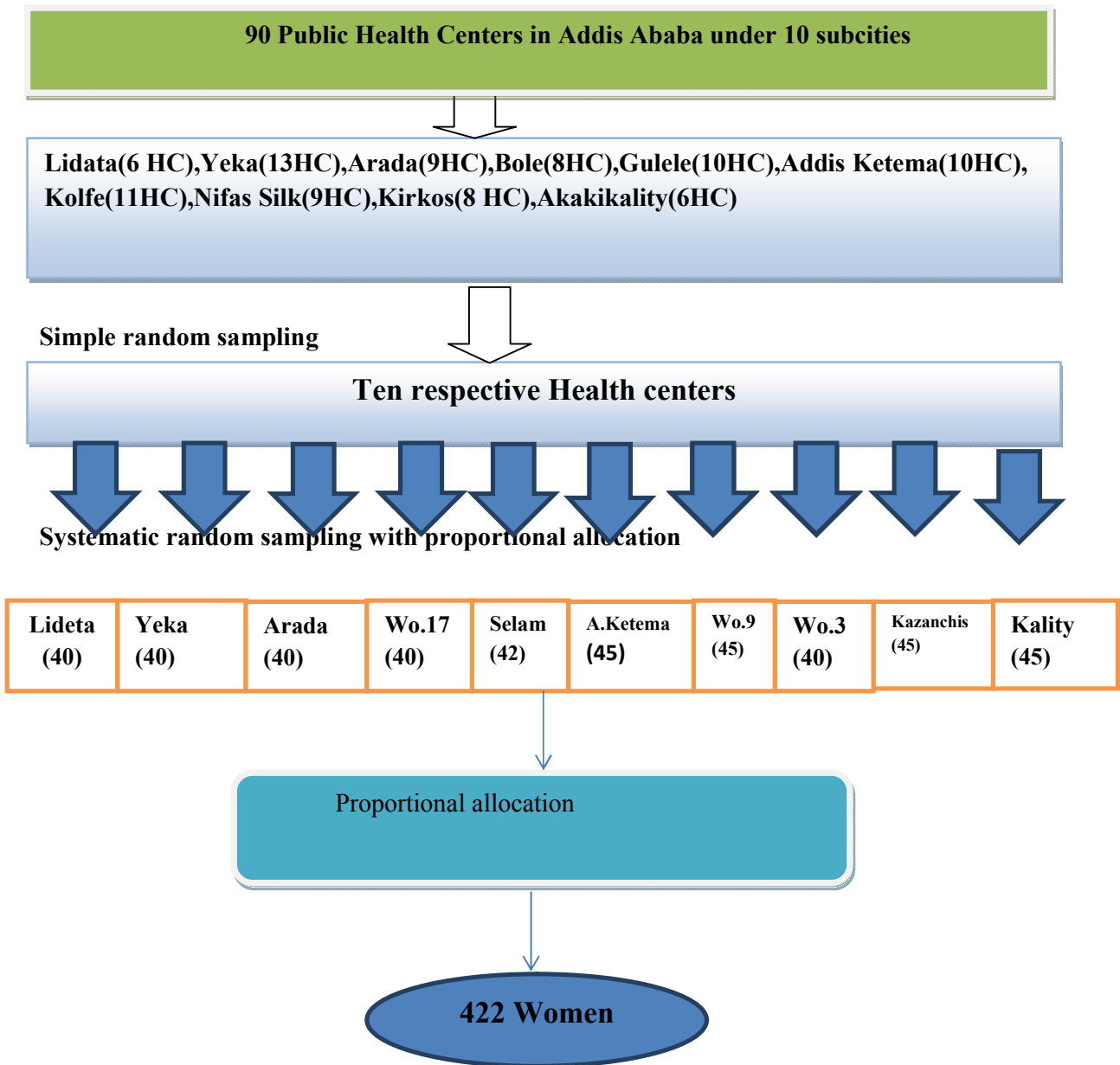
D=Precision (margin of error) =0.05

$$n = \frac{(1.96)^2 0.52(1 - 0.52)}{(0.05)^2} = 384$$

Adding a non-response rate of 10%, the final sample size was 422.

#### **4.6. Sampling technique**

Simple random sampling technique was used for selection of 10health centers out of 90 health centers in Addis Ababa in which 1 health center from each sub city. The expected number of women who will visit the selected health facility was considered and proportional sample size was calculated for each health facility so as to give the total sample size and then respondents 'were selected proportional to the sample size.



**Figure 2: Schematic presentation of sampling techniques used to select study subjects from public health centers in Addis Ababa, 2016**

#### **4.7. Variables of the study**

##### **4.7.1. Dependent Variable**

- Unsafe abortion

##### **4.7.2. Independent Variables**

- Socio-demographic factors
- Socio- cultural factors
- Obstetric factors
- Abortion law
- Service availability and access related factors
- Knowledge

#### **4.8. Operational Definitions**

**Safe abortion-** Is termination of pregnancy by qualified and skilled persons with standardized medical standard.

**Unsafe abortion:** is defined by the WHO as abortion “a procedure for terminating an unintended pregnancy carried out by either persons lacking the necessary skills or in an environment that does not conform to minimal medical standards, or both (1).

#### **4.9. Data Collection Instrument**

Structured interviewer administered questionnaire which was adopted from literature reviews of previous studies (14), (15) , (18), (19), (20) was used to collect data on unsafe abortion and associated factors. The questionnaire included three sections which are the socio- demographic characteristics section, knowledge related questions section and obstetric history and practice related questions section. All the questions were prepared primarily in English and back translated to Amharic by experts' who were fluent in both language and back translated to English to see its consistency.

#### **4.10. Data collection methods**

Three diploma level data collectors was recruited to collect the data after one day orientation training on how to administer questioners and the objectives of the study and in general to ensure that all the data collectors had the same information about the study instrument. Data was collected by a face to face interview.

#### **4.11. Data quality Assurance**

The English version questionnaire was translated into Amharic and back translated to English to check its consistency by experts. The data collectors as well as supervisor were oriented on issue related to the overall data collection procedure. Five percent of the questionnaire was pre-tested at other health centers which were not included in the final sample to check acceptability and consistency two weeks ahead of the actual data collection and necessary correction was taken before the actual data collection.

The completeness of the questionnaire was checked daily by supervisor and principal investigators. Since no method was used to confirm the responses of the participants, study participants were consented to give the truth by explaining the purpose and importance of the study and assuring the confidentiality of data they provide.

#### **4.12. Data processing and analysis**

Each completed questionnaire was coded on pre-arranged coding sheet by the principal investigator to minimize errors. Data was entered onto a computer using Epidata version 3.0, 10 % of the responses was randomly selected and checked for consistency of the data entry. Then printed frequencies were used to check for outlier and clean data. The data was cleaned accordingly and then exported to SPSS Windows version 20.0 for further analysis.

Frequency distributions, percentages and p-values were used to describe the study population in relation to relevant variables. Analysis of data was performed using two step logistic regressions [bivariate and multivariate] to see the effect of the independent variables on the dependent variable by controlling confounders. Creating model for each outcome variables was carried out. This statistical method was preferred because the dependent (outcome) variable is dichotomous, that is unsafe abortion and no history of abortion and the independent variables are metric or categorical. Statistical significance was evaluated at 95% levels of significance. Tables and graphs were also used to present data.

#### **4.13. Ethical consideration**

Ethical clearance was obtained from the Research and Ethics Committee of the department of Nursing and midwifery of AAU and official letter was sent to the selected public health centers. After getting permission from the health centers to participate in the study, verbal consent was obtained for willingness of study subjects to participate. The participants' privacy was maintained by conducting the interview in a private place. They were informed that there will not be any

incentive or harm for their participation in this study. Finally, participants' identity was kept anonymous during data collection and analysis.

#### **4.14. Dissemination and utilization of results**

The result of the study will be prepared in hard and soft copy and submitted to Department of Nursing and Midwifery, Addis Ababa University. The findings will be presented to AAU community. Results from this study will be communicated to the selected health centers and various stake holders. Presentation at national or international meetings will be attempted. Finally it will be submitted for publication to national and international peer reviewed journals, as deemed necessary.

## **5. Results**

During the study period 422 women who have visited MCH units of selected health centers in Addis Ababa were approached and invited to participate and asked for their consent. About 20 were excluded from the study due to incomplete responses and refusal. Hence the rest 402 respondents accepted the invitation and were included in the study.

### **5.1. Socio-demographic Characteristics**

As shown in Table 2 below, the mean age of respondents was 26 years with the one third (36.6%) of respondents were in the age group of 25-29 followed by age group of 20-24 (28.1%). About 29.6 % of the respondents were Amhara in their Ethnicity, followed by 26.1% Oromo's; the majority of respondents religious affiliation was found to be orthodox Christianity comprising of 60.9% of the total respondents. Nearly all (94.0%) of respondents were married with about 2.5% were divorced or widowed during the time of data collection. Women whose current marital status was married, widowed or divorced were asked in what age they got married and the vast majority (85.6%) reported that they were 18 and above years old when they first got married.

Overall, 6.7 % of the respondents reported that they couldn't read and write with respondent's entire husbands at least could read and write and about 48.0% of respondents have attained diploma and above. About half (52.0%) of respondents were employed in government or private organizations followed by housewives (29.6%) with about 373(92.8%) of husband were employed.

The average monthly income and number of regular members of the household were also requested and the mean monthly income of the respondent's households was 3776.6 ETB and the average size of the households was 3.75 people per each household with about 92.0% of households own media sources as TV and/ or Radio and about 89.6% were residing in Addis Ababa.

**Table 2. Socio-demographic characteristics of women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b>Age in completed year (Mean± SD) 26.0 ±5.0[N=402]</b>		
15-19	45	11.2
20-24	113	28.1
25-29	147	36.6
30-34	84	20.9
>=35	13	3.2
<b>Ethnicity[N=402]</b>		
Amhara	119	29.6
Oromo	105	26.1
Gurage	84	20.9
Tigre	48	11.9
Wolayita	46	11.4
<b>Religion[N=402]</b>		
Orthodox	245	60.9
Muslim	82	20.4
Protestant	75	18.7
<b>Marital Status[N=402]</b>		
Married	378	94.0
Never married	14	3.5
Divorced/Widowed	10	2.5
<b>Educational attainment[N=402]</b>		
Can't read and write	27	6.7
No formal education but read and write	27	6.7
1-8 <sup>th</sup> grader	60	14.9
8 <sup>th</sup> to 12 <sup>th</sup> grader	124	30.8
Diploma and above	164	40.8
<b>Occupation[N=402]</b>		
Housewife	119	29.6
Government/private employee	209	52.0
Merchant	55	13.7

Student	19	4.7
<b>Age at first Marriage [N=378]</b>		
<18	44	10.9
18 and above	344	85.6
<b>Average monthly income in ETB(Mean± SD) 3776.6 ±2193.6 [N=402]</b>		
<585	9	2.2
586-1650	32	8.0
1651-3145	180	44.8
3146-5195	89	22.1
5196-7758	55	13.7
7759-10833	37	9.2
<b>House hold size(Mean± SD) 3.75 ±1.5 [N=402]</b>		
1-3	213	53.0
>=4	189	47.0
<b>Residence[N=402]</b>		
Addis Ababa	360	89.6
Outside Addis Ababa	42	10.4
<b>Husbands Educational attainment [N=378]</b>		
No formal education but read and write	27	6.7
1-8 <sup>th</sup> grader	46	11.4
8 <sup>th</sup> to 12 <sup>th</sup> grader	112	27.9
Diploma and above	193	48.0
<b>Husbands employment status[N=378]</b>		
Employed	373	92.8
Unemployed	5	1.2
<b>Availability of TV/Radio[N=402]</b>		
No	32	8.0
Yes	370	92.0

## **5.2. Abortion Knowledge**

In order to measure their knowledge regarding terminating pregnancy women were asked whether they ever heard about terminating pregnancy (abortion) and about 388 (96.5%) of the interviewed women responded that they heard about it and these women were asked whether they are informed about safe abortion or not, and about 3.6% responded that they did not know about unsafe abortion.

Similarly those women who replied that they know about safe abortion services were also asked about places where abortion services are provided and individuals who have the ability to perform safe abortion and majority (84.3%) mentioned Hospital and significant number of respondents (49%) has also mentioned pharmacy and drug vendors as places where safe abortion services are provided. Likewise, among individuals who have competencies to provide abortion services, Physicians were mentioned by majority of respondents (81.3%) and about one third (32.1% and 30.8%) mentioned traditional birth attendants and traditional healers as individuals who are trained and capable to provide safe abortion services.

Respondents were also asked about the likelihood of facing severe abortion consequences as a woman gets an abortion from unsafe places. Among the problems, vaginal bleeding and abdominal pain were mentioned by 344(85.6%) and 281(69.9%) respectively.

Regarding abortion law of Ethiopia, about half (54.5%) responded correctly in which abortion is legal in Ethiopia in some specific circumstances like rape and incest. Table 3 below summarizes knowledge of respondents regarding abortion.

**Table 3. Knowledge regarding abortion and abortion services among women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

Variable	Frequency	Percent
<b>Ever heard about abortion [N=402]</b>		
No	14	3.5
Yes	388	96.5
<b>Ever heard about safe and unsafe abortion [N=388]</b>		
No	14	3.6
Yes	374	96.4
<b>Know where safe abortion services are provided [N= 388]</b>		
No	43	11.1
Yes	345	88.9
<b>Mentioned places where safe abortion services are provided [N=345] (Percentage didn't add to 100 due to multiple answer)</b>		
Hospital	339	84.3
Health center	256	63.7
Clinic	252	62.7
Health post	75	18.7
Pharmacy/ Drug vendor	197	49
Private doctor's office	116	28.9
<b>Mentioned individuals who can provide safe abortion services [N=345] (Percentage didn't add to 100 due to multiple answer)</b>		
TBA/Trained TB	129	32.1
Physician	327	81.3
Health Officers	201	50.0
Nurse/Midwife	297	73.9
Traditional healer	124	30.8
<b>Mentioned problems that may occur after unsafe abortion [N=345] (Percentage didn't add to 100 due to multiple answer)</b>		
Vaginal bleeding	344	85.6
Other vaginal discharge	190	47.3
Abdominal Pain	281	69.9
Fever	180	44.8
<b>Is induced abortion legal according to Ethiopian law [N= 388]</b>		
Yes for all reason	26	6.5
Yes with some specific circumstance	219	54.5
Not legal	48	11.9
Not sure	95	23.6

### 5.3. Abortion Practice

Before asking the abortion history of respondents, questions related with obstetric history of respondents were presented. Respondents were asked whether they have been pregnant at least once, and based on their response they were asked about the number of pregnancies, number of pregnancies which ended in live birth and still birth, their age when they gave birth for the first

time and current number of live children. Women whose number of pregnancy and number of children vary were asked for why the discrepancy happened between their number of pregnancy and number of children. Among the reasons mentioned twin delivery and “I am now pregnant” were mentioned.

Among respondents, about 362 (90%) have been pregnant at least once in their lifetime. From respondents who have been pregnant in their life, about one fifth 96 (23.9%) have been pregnant for about 3 or more time, about 139(34.6%) of respondents gave two or more live births and about 15(3.7%) have two pregnancies which were ended up with still birth. Regarding age when given birth for the first time, about 35(8.7%) gave birth at age less than 18 and about 60(14.9%) have three or more live children at the time of data collection. Table 4 below summarizes obstetric history of respondents.

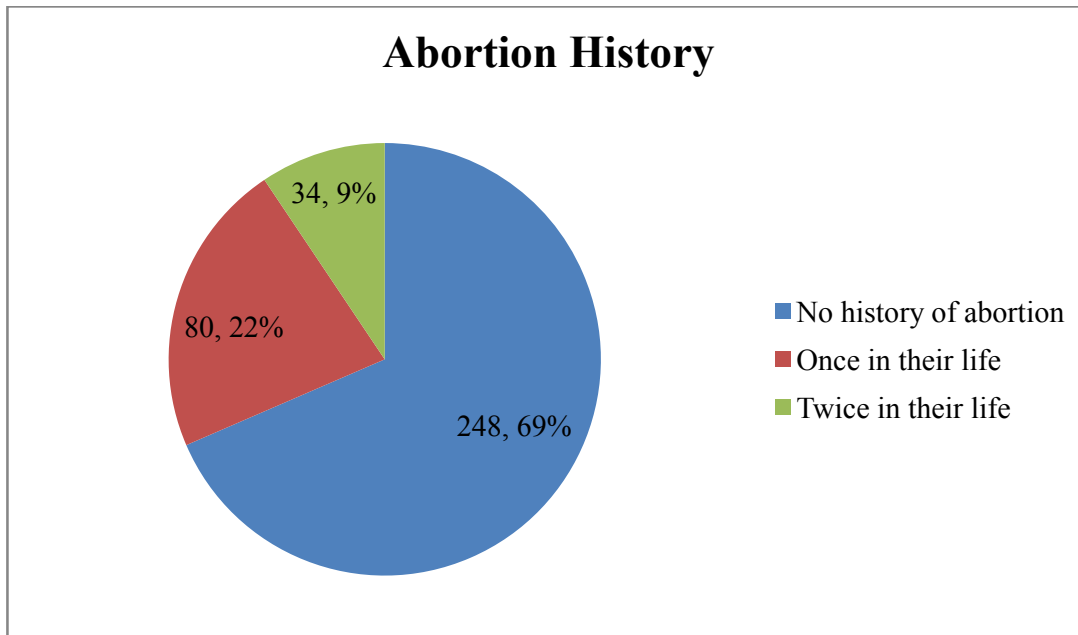
**Table 4. Obstetric history of women visiting MCH clinics of Health centers, September-October 2016, Addis Ababa, Ethiopia**

Variable	Frequency	Percent
<b>Ever been pregnant at least once[N=402]</b>		
No	40	10.0
Yes	362	90.0
<b>Number of pregnancy [N=362]</b>		
1-2	266	66.2
>=3	96	23.9
<b>Number of live births [N=362]</b>		
0	68	16.9
1	155	38.6
>=2	139	34.6
<b>Number of still births [N=362]</b>		
0	266	66.2
1	81	20.1
2	15	3.7
<b>Age when given birth for the first time [N=315]</b>		
<18	35	8.7
18-21	140	34.8
>21	140	34.8
<b>Number of Live Children[N=294]</b>		
0	26	6.5
1-2	208	51.7
>=3	60	14.9

After a series of questions regarding obstetric history, respondents who have ever been pregnant at least once were asked whether they have had abortion in their life time. Women who replied that they have had abortion were asked on the nature of abortion and age when it has occurred. Similarly those women who responded intentional/ induced abortion have been asked about their reason why they want to terminate pregnancy and the safety of the procedure in which whether it was conducted in health facility with the assistance of trained health professional. Finally

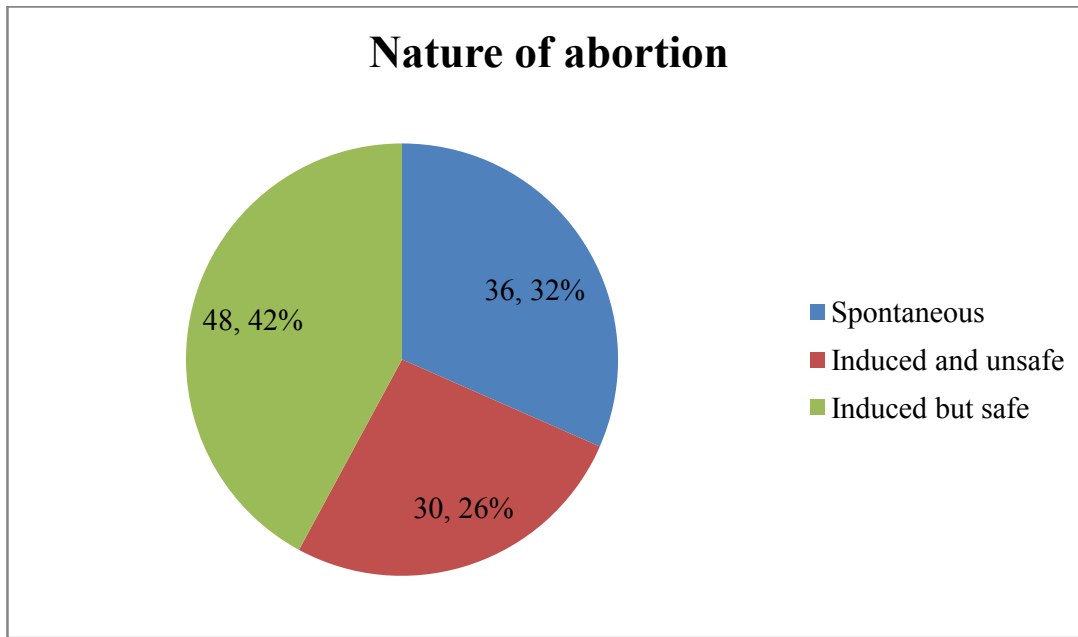
respondents were asked about their current pregnancy status, whether they have experience d unwanted pregnancy and how this unintended pregnancy happened.

As shown in figure 3 below, among respondents who have ever been pregnant (279), about 80(22%) and 34(9%) have had one and two abortions in their life.



**Figure 3: History of abortion among women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

As shown in figure 4 below, among respondents who ever had history of abortion (114), about 36(32%) experienced abortions which were spontaneous and the rest (78) had induced abortion of which about 30(26%) made abortions assisted by persons lacking the necessary skills or in an environment not in conformity with minimal medical standards.



**Figure 4: Nature of abortion of women who have history of abortion among women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

Those respondents who replied they had history of induced abortion were asked their reason to discontinue their pregnancy; and about 14(3.5% of total) replied that since it was out of marriage and about 35(8.7% of total) replied the pregnancy was unwanted.

Current pregnancy status of respondents was asked and about 234(58.2%) responded that they are not pregnant and they were asked whether they are currently using any contraception and about 148(36.8%) replied they are using contraceptives. Furthermore, among the respondents about 22.6% have faced unwanted pregnancy mainly since they were not using contraceptive methods (17.2%). Table 5 below summarizes reasons for terminating pregnancy and their experience of unwanted pregnancy.

**Table 5. Mentioned reasons for terminating pregnancy and experience of unwanted pregnancy among women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
<b>Reason to terminate their pregnancy[N=78]</b>		
Not to stop Education /Job	9	2.2
Don't have enough money	20	5.0
Unwanted pregnancy	35	8.7
Happened out of marriage	14	3.5
<b>Current pregnancy status[N=362]</b>		
No	234	58.2
Yes	128	31.8
<b>Currently using Contraceptive[N=234]</b>		
No	86	21.4
Yes	148	36.8
<b>Ever faced unwanted pregnancy[N=362]</b>		
No	271	67.4
Yes	91	22.6
<b>Situation when they face unwanted pregnancy[N=91]</b>		
I did not know about contraceptives	5	1.2
I did not use contraceptives	69	17.2
I have used contraceptives but failed	17	4.2

#### **5.4. Factors associated with unsafe abortion**

Bivariate logistic regression was performed on each socio-demographic, obstetric history and knowledge related variables. Variables which have P-value < 0.05 were selected and used for multivariate logistic regression analysis.

In bivariate analysis, maternal age, educational level, occupation, knowledge regarding the legalization status of abortion in Ethiopia, number of pregnancy and number of live children were entered. Among these variables only, educational level, occupation, knowledge regarding the legalization status of abortion in Ethiopia, and number of live children has shown significant association ( $P < 0.05$ ) in bivariate analysis and entered to multivariable logistic regression in order to minimize the effect of confounders.

As indicated in Table 6 below, independent predictors of unsafe abortion were only maternal educational status, knowledge regarding the legalization status of abortion in Ethiopia, and number of live children in which those mothers who have not completed primary education were about 10 times more likely ( $AOR(95\%CI) = 10(2, 16)$ ) to have unsafe abortion in comparison with those women whose educational status was primary and above, in comparison with those women who replied abortion is legal, those who said it is allowed only in some cases were about 7 times more likely ( $AOR (95\%CI) = 7.0(1.1, 44.7)$ ) and those who replied not sure about its legalization were more than 8 times ( $AOR (95\%CI) = 8.4(1.1, 63.8)$ ) more likely to have unsafe abortion. Regarding number of live children, compared with those women who have no live child currently; those mothers who have more than 3 children and those mothers who have 1- 2 children were about ninety seven and twelve times more likely ( $AOR (95\%CI) = 97.8 (13.3, 72.8)$  and  $12.3( 3.5, 45.4)$ ) to have unsafe abortion.

**Table 6: Factors associated with having unsafe abortion among women visiting MCH clinics of Health centers, September- October 2016, Addis Ababa, Ethiopia**

Variables	Abortion Safety		COR(95%CI)		P-value	AOR(95%CI)	P-value
	Unsafe Abortion	Safe Abortion					
	N	%	N	%			
<b>Maternal Education Level</b>							
Less than primary	5	16.7	49	13.2	1	1	
Primary and above	25	8.3	323	86.8	1.3(0.5, 3.6)	10(2, 16)	0.014*
<b>Maternal occupation</b>							
Housewife/student	5	16.7	133	35.8	1	1	
Gov't /Private employee	15	50	194	52.2	0.5(0.2, 1.4)	0.4(0.1, 1.6)	0.187
Merchant	10	33.3	45	12.1	0.2(0.1, 0.5)	0.5(0.1, 4.0)	0.526
<b>Is induced abortion legal according to Ethiopian law</b>							
Yes for all reason	5	16.7	21	5.9	1	1	
Yes for some reason	5	16.7	214	59.8	10.2(2.7, 38.1)	7.0(1.1, 44.7)	0.039*
Not legal	15	50	33	9.2	0.5(0.2, 1.7)	0.2(0.02, 1.7)	0.141
Not sure	5	16.7	90	25.1	4.3(1.1, 16.2)	8.4(1.1, 63.8)	0.040*
<b>Number of Live Children</b>							
0	15	50	119	32	1	1	
1-2	5	16.7	203	54.6	5.1(1.8, 14.4)	12.3( 3.5, 45.4)	0.000*
>=3	10	33.3	50	13.4	0.6(0.3, 1.5)	97.8 (13.3,72.8)	0.008*

## 6. Discussion

This facility based cross sectional study assessed prevalence of unsafe abortion and associated factors which are believed to lead to unsafe abortion. In this study among respondents who have ever been pregnant (279), about 80(22%) and 34(9%) have had one and two abortions in their life and the prevalence of unsafe abortion was reported by 30 women (26%) of total abortions [74.6 per 1000 women]. This finding was much higher than the overall unsafe abortion rate in Africa (29 abortions per 1,000), East Africa (38 abortions per 1,000)(13), the national average in Ethiopia( 23 abortions per 1,000) and in Addis Ababa (49 abortions per 1,000) women of childbearing age (3), the national estimate in Brazil(mean unsafe abortion rate: 17.0 abortions/1,000 women of childbearing age) (11). This high abortion rates in Addis Ababa might be likely the result of the availability of larger number of government and private health care providers which might draws women from surrounding areas for abortion related complications. In addition due to the fact that abortion is highly stigmatized in Ethiopian society means that a lot of underreporting can be expected, particularly in home based survey when questions require individuals to report on abortions usually by resident enumerators in national surveys.

The abortion rate reported in this study was also considerably lower than the rates reported in Dire Dawa and Harari (184 per 1,000) (3). This disparity might be related with differences including the legal context, the availability of safe abortion services, the level of stigma surrounding abortion in the society, the degree of women's access to information on abortion, and differences in woman's socioeconomic status.

Women are likely to resort to an unsafe abortion when safe abortions are restricted, unavailable, not familiar or inaccessible. In this study, the independent predictors of unsafe abortion were maternal educational status, knowledge regarding the legalization status of abortion, and number of live children. Unlike this study, in a study done in Gurage Zone age group have shown significant association (15), in a national DHS study in India, urban residence, couple's education, and wealth status were found to be significantly associated (18), other Indian study done in Ballabgarh which showed Caste/ tribe, wealth index and birth order were the factors that were significantly associated (10), a study done in Volta region, Ghana marital status and employment status were found to be associated (19), other study in

Hohe Ghana, women who were married, peri-urban residents, and women with formal employment were more likely to have had an induced abortion (23).

Compared with those women who have no live child currently; those mothers who have more than 3 children and those who have 1- 2 children were about ninety seven and twelve times more likely to have unsafe abortion. ,in a study done in Gurage Zone, those women who have greater than four pregnancies were more likely to have induced abortion than those who have less than four pregnancies(15), in a study done in Volta region, Ghana number of total pregnancies were found to be associated with inducing abortion, in which women with their second pregnancies were 3.8 times more likely and women with more than two pregnancies were 6.6 times more likely to do so (19).

In this study, those mothers who have not completed primary education were about 10 times more likely to have unsafe abortion in comparison with those women whose educational status was primary and above. In contrast to this finding, in a study done in Gurage Zone, in which those women who were in primary school were less likely to have induced abortion(15),a study in Hohe, Ghana compared with women with secondary education, women with basic education and uneducated women were significantly less likely to have had an abortion (23).

Regarding number of live children, similar with this study, in a study done in Batu, women who had two and above births were more likely to have an abortion compared to women who had one births (14).

Besides the scarcity of studies conducted on unsafe abortion in Ethiopia, the disparities' between the independently associated factors between this study and other studies as well between the studies included in the literature review and discussions signals the need for further research especially employing different methods than the present study.

## **7. Conclusion**

This study tried to assess the prevalence of unsafe abortion and associated factors in selected public health centers in Addis Ababa. Based on the findings of this study, prevalence of unsafe abortion is high among studied women.

From the variables in this study, maternal educational level, occupation, knowledge regarding the legalization status of abortion in Ethiopia, and number of live children was found to be significantly associated with the occurrence of unsafe abortion. On the other hand ethnicity, marital status, average monthly income, age at first marriage, educational attainment of their husbands were insignificantly associated

## **8. Recommendations**

Based on the findings of this study, it is recommended that:

### **For the ministry of health**

- Should work on advocating the legal status of abortion as per the Ethiopian law since those who didn't know the legal status of abortion might seek the service from people outside the health facility whom they think they can perform abortion without questioning them.
- Work with the media and other concerned bodies to teach woman about the high risks of utilizing unsafe abortion services.

### **For Addis Ababa city government**

- Work on ways to eliminate places where unsafe abortion is provided.

### **For health centers**

- To provide quality sexuality education, family planning and reproductive health services since it is observed that as the number of live children increases, the probability of having unsafe abortion also increased. Hence, fulfilling unmet family planning needs and sexuality education might help reduce unwanted pregnancy and the number of children.

### **For the ministry of education**

- Should work on integrating reproductive health education at primary school level

## **9. Strength and limitations of the study**

### **Strengths**

- This study tried to assess prevalence of unsafe abortion and to identify associated factors among women who visited MCH clinics of public health centers in Addis Ababa, Ethiopia. Hence, the result of this study can serve as a baseline data for other studies.

### **Limitation**

- The study is institution based, so the population sample may not be representative of the situation at the community level.
- The questionnaire contains sensitive questions, which influence the reliability of the response. Moreover, the lack of standardized measures for abortion-related data presents a challenge to the validity and conclusion of the survey findings on this topic.
- This study was also susceptible to recall bias, as its participants may not have been able to accurately remember issues from the past.

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**8. ANNEXES**

**Annex 11. 1 Questionnaire**

**11.1.1. English Version Questionnaire**

Questionnaire ID
_____
(001-422)

ADDIS ABABA UNIVERSITY  
 COLLEGE OF HEALTH SCIENCES  
 SCHOOL OF ALLIED HEALTH SCIENCES  
 DEPARTMENT OF NURSING AND MIDWIFERY

**Introduction and Consent**

Hello! My name is \_\_\_\_\_. I am a data collector to Mrs.Selamawit Mulugeta who is MSc student at Addis Ababa University, Department of Nursing and Midwifery who is conducting an assessment about the prevalence of abortion and its associated factors in Addis Ababa. I would very much appreciate your participation in this survey. I would like to ask you about pregnancy, child birth and other related issues. This information will help the governmental and non - governmental organizations to plan provision of comprehensive pregnancy and related services. The questionnaire usually takes between 20-30 minutes to complete. Whatever information you provide will be kept confidential and will not be shared to other persons. Participation in this interview is entirely voluntary and you can choose not to answer any individual questions or all of the questions. However, we hope that you will participate fully in this assessment since your genuine responses are important. Do you have any questions about the survey?

May I begin the interview now? Yes  No

CONTINUE IF VERBAL CONSENT GIVEN TO BE INTERVIEWED

Research objectives	1. To assess the prevalence of unsafe abortion among women attending MCH units of public health centers in Addis Ababa. 2. To identify factors associated with unsafe abortion among women attending MCH units of public health centers in Addis Ababa.
Personnel	Interviewer Name and sign _____ Field Supervisor Name and sign _____
Result code	Completed -----1 Postponed -----2 Refused -----3 Partly completed -----4

	Other(SPECIFY) _____99
--	------------------------

<b>Part I - Socio-demographic variables</b>			
S/N	Questions	Responses	Skip
101.	How old are you?	_____ completed years	
102.	What is your Ethnicity?	Amhara -----1 Oromo -----2 Gurage -----3 Wolayita-----4 Tigre -----5 Other[specify ]-----99	
103.	What is your Religion?	Orthodox -----1 Protestant-----2 Muslim-----3 Other[specify ]-----99	
104.	What is your educational level?	Cannot read and write -----1 Able to read and write -----2 Primary school (1- 8) -----3 Secondary school (9- 12) -----4 College diploma and above -----5	
105.	What is your occupation?(Maternal);	House wife-----0 Government Employed.-----1 Merchant -----2 Others[specify] -----99	
106.	What is your current Marital status?	Single-----1 Married -----2 Divorced-----3 Widowed-----4 Cohabited -----5	If the answer is 2(Married) ask Q 107 and 108 if not skip to 109
107.	What is the educational status of your husband? <b>(For Married only)</b>	Cannot read and write -----1 Able to read and write -----2 Primary school (1- 8) -----3	

		Secondary school (9- 12) -----4 College diploma and above -----5	
108.	Is your partner employed?( <b>For Married only</b> )	Not Employed-----0 Employed-----1	
109.	How old were you when you get married first?	_____ completed years	
110.	Where is your current Residence?	Addis Ababa-----1 Out of Addis Ababa -----2	If the answer is 1 ask Q110
111.	Estimated Household income per month?	-----ETB	
112.	The number of people currently living with you?	-----	
113.	Do you have radio/TV in your home?	No-----0 Yes -----1	

**Part II – Knowledge related variables**

S/N	Questions	Responses	Skip	
201.	Have you ever heard about terminating pregnancy(abortion)?	No -----0 Yes -----1	If No skip to Q301	
202.	Have you ever heard about safe and unsafe abortion?	No -----0 Yes -----1		
203.	Do you know places/persons where unwanted pregnancy is terminated?	No -----0 Yes -----1	If No skip to Q205	
204.	Where are the different places that a woman in this or nearby community can go to terminate an unwanted Pregnancy? <b>(List all they mentioned)</b>	<b>Mentioned= Yes(1), Not mentioned=No(2)</b>	<b>Yes</b>	<b>No</b>
		A. Hospital	1	2
		B. Health center	1	2
		C. Clinic	1	2
		D. Health post	1	2
		E. Pharmacy	1	2
		F. Drug vendor	1	2
G. Private doctor	1	2		

		H. Other [Specify]		
205.	Who are all the different people who can help a woman in this or nearby community to terminate an unwanted pregnancy? ( <b>List all they mentioned</b> )	<b>Mentioned= Yes(1), Not mentioned=No(2)</b>	<b>Yes</b>	<b>No</b>
		A. TBA/Trained TB	1	2
		B. Physician	1	2
		C. Health Officers	1	2
		D. Nurse/Midwife	1	2
		E. A Health worker (in his/her house premise)	1	2
		F. Traditional healer	1	2
		G. Other [Specify]		
206.	What problems can happen in a woman after terminating pregnancy? ( <b>List all they mentioned</b> )	<b>Mentioned= Yes(1), Not mentioned=No(2)</b>	<b>Yes</b>	<b>No</b>
		A. Vaginal bleeding	1	2
		B. Other vaginal discharge	1	2
		C. Abdominal Pain	1	2
		D. Fever	1	2
		E. Other [Specify]		
207.	Is it legal for a woman to terminate an unwanted pregnancy according to the government of Ethiopia?	Yes for all reasons-----1 Yes with some specific reasons-----2 No-----3 Not sure-----4		
<b>Part III – Practice related variables</b>				
<b>S/N</b>	<b>Questions</b>	<b>Responses</b>	<b>Skip</b>	
301.	Have you ever been pregnant?	No -----0 Yes -----1	If No thank for their time and complete	
302.	How many times been pregnant?	-----		
303.	How many pregnancies ended in Live births or still birth?	Live birth--- ----- Still birth -----		
304.	What was your age when you have given birth for the first time?	-----Year		

305.	Number of children currently alive?	Total _____ Boys _____ Girls _____	
306.	Have you ever had an abortion?	No -----0 Yes -----1	If No thank for their time and complete
307.	What was the nature of the termination /miscarriage/abortion?	Spontaneous-----1 Induced -----2	
308.	When these last abortions happen?	-----Years ago	
309.	What was your age during last abortion?	-----Year	
310.	What was your reason to terminate your pregnancy?	Desire of small family size-----1 Education ,employment-----2 Poverty -----3 Unwanted pregnancy-----4 Being unmarried -----5 Rape -----6 Bad health condition-----7 Other [Specify]-----99	
311.	Where did you go to get the Abortion services?	Other than health center/hospital -0 Health center/Hospital -----1	
312.	Are you pregnant now?	Yes -----1 No-----2 Unsure -----8	If Yes askQ116
313.	Are you currently using any contraceptives?	No -----0 Yes -----1	
314.	Have you ever faced unwanted pregnancy?	No -----0 Yes -----1	If No thank for their time and complete
315.	If you faced unwanted pregnancy what the reason?	I did not know contraceptives-----1 I know but I did not use contraceptives -----2 I know and used contraceptives but faced unwanted pregnancy-----3	

**Thanks for your time!!**

**11.1.2. Amharic Version Questionnaire**

አዲስ አበባ ዩኒቨርሲቲ

ጤና ሳይንስ ኮሌጅ

የአላይድ ጤና ሳይንስ ትምህርት ቤት

የነርቪንግ እና ሚድዋይፈሪት/ትክፍል

**መግቢያ እና የስምምነት መጠየቂያ**

ጤናይስጥልኝ! ስሜ \_\_\_\_\_ ይገለጹ። የመጣሁት በአዲስ አበባ ዩኒቨርሲቲ የነርቪንግ እና ሚድዋይፈሪት ት/ት ክፍል የሁለተኛ ዲግሪ ተማሪ የሆነችዎ/ችዎ **ሰላማዊት ሙሉጌታ** እርግዝና(ጽንሰ)ስላማቋረጥ እና ተያያዥ ጉዳዮች ላይ የመመረቂያ ጥናት እየሰራች ስለሆነ መረጃ ለመሰብሰብ ነዉ። እርስዎም በዚህ ጥናት እንዲሳተፉ የተጠየቁት በአጋጣሚ (በእጣ) ሲሆን የእርስዎ ስምም ሆነአድራሻ በመጠይቁ ውስጥ አይካተትም። እንዲሁም የዕርስዎ ማንነትም ሆነ የሰውነት ምላሽ የዕርስዎ ሥላሴም በምንም ሁኔታ አይገለጽም። በዚህ ጥናት በመሳተፍዎ የሚደርስብዎ ምንም አይነት ጉዳት የለም፤ ቃለ መጠይቁ የሚፈጀው ከ20-25 ደቂቃ ሲሆን፤ በዚህ ጥናት ስለ እርግዝና፤ ስለ ልጅ መወለድና ውርጃ(ጽንሰማቋረጥ)ን የተመለከቱ ጥያቄዎችን እጠይቅዎታለሁ። የዚህ ጥናት ውጤትም ለተለያዩ መንግስታዊ እና መንግስታዊ ያልሆኑ ድርጅቶች እንደግብአት ሊጠቀሙበት ስለሚችሉ እርስዎ በዚህ ጥናት እንዲሳተፉ ይበረታታሉ። በዚህ ጥናት የሚሳተፉት ያለምንም አስገዳጅነት ሲሆን ፈቃደኛ ካልሆኑ ከመጀመሪያውም ሆነ ቃለ መጠይቁን ከጀመሩ በኋላ ማቋረጥ ይችላሉ።

**መጠይቁን ከመጀመሪያችን በፊት መጠየቅ የሚፈልጉት ጥያቄ ካለ እንዲጠይቁ እድል ይስጡ!!**  
 በጥናቱ ለመሳተፍ ፈቃደኛ ነዎት?  
 ✓ አዎ                      ፤ ቃለ መጠይቁን ይጀምሩ                        
 ✓ አይደለሁም፤ አመስግነዉ ያቁሙ።                     

የጥናቱ አላማ	1. በአዲስ አበባ ዉስጥ በሚገኙ የመንግስት ጤና ጣቢያዎች የእናቶች እና ህጻናት ክፍል ከሚመጡ እናቶች ዉስጥ ምን ያህሉ ንጽህናዉ ያለተጠበቀ ፤ጎጂ እና ጉዳት ሊያስከትል የሚችል ውርጃ(ጽንሰማቋረጥ) ፈጽመዉ እንደሚያዉቁ ለመዳሰስ 2. በአዲስ አበባ ዉስጥ በሚገኙ የመንግስት ጤና ጣቢያዎች የእናቶች እና ህጻናት ክፍል ከመጡ እናቶች ዉስጥ ጉዳት ሊያስከትል የሚችል ውርጃ (ጽንሰማቋረጥ) የሚያደርጉ ገፊ ምክንያቶችን ለመዳሰስ
የሰዉ	የጠያቂዉ ስም _____ ፊርማ _____

ሃይል	የተቆጣጣሪው ስም _____ ፊርማ _____
የመጠይቅ ቁጥር	-----
የመጠይቅ ዉጤት	ተጠናቋል -----1 ወደሌላ ጊዜ ተላልፏል-----2 ስምምነት አልሰጡም -----3 በግማሽ ተጠናቋል -----4 ሌላ[ይግለጹ] _____ 99

**ክፍል አንድ: ስነ-ህዝባዊ ጥያቄዎች**

ተ.ቁ	ጥያቄዎች	አማራጭ ምላሾች	ዝላል
101.	እድሜዎ ስንት ነው?	_____ አመት	
102.	የየተኛዉ ብሄር አባልነዎት?	አማራ -----1 አሮሞ -----2 ጉራጌ-----3 ወላይታ-----4 ትግሬ -----5 ሌላ[ይግለጹ] -----99	
103.	የየተኛሁ ሃይማኖት ተከታይ ነዎት?	ፕሮቴስታንት -----1 አርቶዶክስ -----2 እስላም -----3 ሌላ[ይግለጹ] -----99	
104.	የትምህርት ደረጃዎ ምን ያክል ነው?	ማንበብ እና መጻፍ የማትችል-----1 ማንበብ እና መጻፍ የምትችል-----2 የመጀመሪያ ደረጃ ት/ት(1- 8) -----3 የሁለተኛ ደረጃ ት/ት(9- 12) -----4 የኮሌጅ ዲፕሎማ እና በላይ-----5	
105.	ስራዎ ምንድን ነው?	የቤት እመቤት-----1 የመንግስት ሰራተኛ-----2 ነጋዴ-----3 ሌላ[ይግለጹ] -----99	
106.	የጋብቻ ሁኔታዎ ምንድን ነው?	ያላገባች-----1 ያገባች-----2 የተፋታ/ች-----3 ባል የሞተባች-----4 እንደሚስት አብራ የምትኖር-----5	ያገባች ከሆነ 107 እና 108 ይጠይቁ ካልሆነዉደ ጥያቄ ቁጥር 109 ይለፉ

107.	የባለቤትዎ የትምህርት ደረጃ ምን ያክል ነው? <b>(ያገቡትን ብቻ ይጠይቁ)</b>	ማንበብ እና መጻፍ የማይችል-----1 ማንበብ እና መጻፍ የሚችል-----2 የመጀመሪያ ደረጃ ት/ት(1- 8) -----3 የሁለተኛ ደረጃ ት/ት(9- 12) -----4 የኮሌጅ ዲፕሎማ እና በላይ-----5	
108.	ባለቤትዎ ስራ አላቸው? <b>(ያገቡትን ብቻ ይጠይቁ)</b>	የለውም-----0 አለው-----1	
109.	በስንት አመትዎ ነው ለመጀመሪያ ጊዜ ያገቡት?	_____ አመት	
110.	በአሁኑ ጊዜ የመኖሪያ አድራሻዎ የት ነው?	አዲስአበባ-----1 ከአዲስ አበባ ዉጭ-----2	
111.	የቤተሰቡ አማካይ ወርሃዊ ገቢ ምን ያህል ነው?	-----ብር	
112.	በቋሚነት የሚኖሩ የቤተሰብ አባላት ቁጥር?	-----	
113.	በቤት ዉስጥ ሬዲዮ /ቴሌቪዥን ይገኛል?	የለም-----0 አዎ-----1	

**ክፍልሁለት- ግንዛቤን የሚዳስሱ ጥያቄዎች**

ተ.ቁ	ጥያቄዎች	አማራጭ ምላሾች	ዝላል	
208.	ስለ ውርጃ (ጽንሰማቋረጥ) ሰምተዉ ያዉቃሉ?	የለም-----0 አዎ-----1	የለም ከሆነ ወደ 301 እለፍ	
209.	ጉዳት ሊያስከትል ስለሚችል ውርጃ (ጽንሰማቋረጥ) ሰምተዉ ያዉቃሉ?	የለም-----0 አዎ-----1		
210.	ያለተፈለገ እርግዝናን ማቋረጥ የሚቻልባቸዉ / ማቋረጥ የሚችሉ ሰዎች የሚገኙባቸዉ ቦታዎችን ያዉቃሉ?	የለም-----0 አዎ-----1	የለም ከሆነ ወደ 205 እለፍ	
211.	አንድ ሴት ያለተፈለገ እርግዝናን ማቋረጥ ብትፈልግ ጽንሰ ማቋረጥ የሚቻልባቸዉ ቦታዎች የትኞቹ ናቸዉ? <b>(የሚያዉቁትን ሁሉ እንዲናገሩ ያዉጣጡና ምልክት ያድረጉ)</b> ከተጠቀሰ= አዎ(1), ካልተጠቀሰ ደግሞ=የለም (2) የሚለዉ ላይ ምልክት ያድረጉ		አዎ	የለም
		I. ሆስፒታል	1	2
		J. ጤናጣቢያ	1	2
		K. የግልክሊኒክ	1	2
		L. ጤናኬላ	1	2
		M. ፋርማሲ	1	2
		N. መድሃኒት መደብር	1	2
		O. የግል ሃኪም	1	2
P. ሌላ[ይግለጹ]				
212.	በአካባቢዎ አንድ ሴት ያለተፈለገ እርግዝናን ማቋረጥ ብትፈልግ ሊረዳት/ወርጃዉን ሊያካሂድላት የሚችሉ ሰዎች እነ ማን ናቸዉ?		አዎ	የለም
		A. የልምድ አዋላጅ	1	2
		B. ሃኪም /ይክተር	1	2
		C. ጤና መኮንን	1	2

	(የሚያውቁትን ሁሉ እንዲናገሩ ያወጣሉና ምልክት ያድረጉ) ከተጠቀሰ= አዎ(1), ካልተጠቀሰ ደግሞ=የለም (2) የሚለው ላይ ምልክት ያድረጉ	D. ነርስ/ሚድናዊ	1	2
		E. ማንኛውም ጤና ባለሙያ ቤት ውስጥ	1	2
		F. የባህል ሀኪም	1	2
		G. ሌላ[ይግለጹ]		
213.	አንድ ሴት ከውርጃ (ጽንሰ ማቋረጥ) በኋላ ምን አይነት ችግር ሊያጋጥማ ትይችላል? (የሚያውቁትን ሁሉ እንዲናገሩ ያወጣሉና ምልክት ያድረጉ) ከተጠቀሰ= አዎ(1), ካልተጠቀሰ ደግሞ=የለም (2) የሚለው ላይ ምልክት ያድረጉ		አዎ	የለም
		F. ከማህጸን ደም መፍሰስ	1	2
		G. የማህጸን ፈሳሽ መኖር	1	2
		H. ከፍተኛ የሆድ ህመም	1	2
		I. ትኩሳት	1	2
		J. ሌላ[ይግለጹ]		
214.	ኢትዮጵያ ውስጥ ጽንሰ ማቋረጥ ህጋዊ ነው?	አዎ በማንኛውም ምክንያት ይቻላል----1 አዎ በተወሰኑ ምክንያቶች ይቻላል----2 አይቻልም-----3 እርግጠኛ አይደለም-----4		

**ክፍል 3- ልማድ እና ተያያዥ ጉዳዮች የሚዳስሱ ጥያቄዎች**

ተ.ቁ	ጥያቄዎች	አማራጭ ምላሾች	ዝላል
301.	አርግዘው ያወቃሉ?	የለም-----0 አዎ-----1	የለም ከሆነ አመስግነው መጠይቁን ያቁሙ
302.	እስካሁን ድረስ ለምን ያህል ጊዜ አርግዘዋል?	-----	
303.	ከእርግዝናዎ ውስጥ ምን ያህል በህይወት ተወለዱ (ሞተው የተወለዱ ካሉ ጠይቅ)?		በህይወት የተወለዱ ብዛት----- ሞተው የተወለዱ ብዛት-----
304.	ለመጀመሪያ ጊዜ የወለዱት በስንት አመት ያደጉ ነው?	----- አመት	
305.	በአሁኑ ወቅት በህይወት ያሉ ልጆች ብዛት?	ጠቅላላ _____ ወንድ _____ ሴት _____	
306.	ከእርግዝናዎ ውስጥ ምን ያህል ቋረጠ (በውርጃ ተጠናቀቀ)?	ውርጃ ኖሮኝ አያውቅም-----0 የውርጃ ብዛት-----	ውርጃ የለም ከሆነ አመስግነው መጠይቁን ያቁሙ
307.	ለመጨረሻ ጊዜ ጽንሱ የተቋረጠው (ውርጃ የተፈጸመው እንዴት ነበር)?	በራሱ/ በድንገት-----1 በፍላጎት-----2	
308.	የመጨረሻው ጽንሰ የተቋረጠው መቶ ነበር?	ከ-----አመት በፊት	
309.	የመጨረሻውን ጽንሰ ሲያቋርጡ እድሜዎ ስንት ነበር?	-----አመት	

310.	ጽንሰ ያቋረጡበት ምክንያት ምን ነበር?	መጠነኛ ቤተሰብ ስለፈለኩ-----1 ትምህርቱን/ስራዬን ማቋረጥ ስለፈለኩ-2 ገንዘብ ስላልነበረኝ-----3 ያለጃቅድ የተከሰተ እርግዝና በመሆኑ---4 ከጋብቻ ውጭ የተከሰተ እርግዝና በመሆኑ ---5 በመደፈር የተከሰተ እርግዝና በመሆኑ-----6 ስላመመኝ-----7 ሌላ[ይግለጹ]-----99	
311.	ጽንሱ የተቋረጠው (ዉርጃ የፈጸሙት ) የት ነበር?	ከጤና ተቋም ውጭ-----0 በጤና ተቋም/በባለሙያ እርዳታ/-----1	
312.	በአሁኑ ጊዜ እርጉዝ ነዎት?	የለም-----0 አዎ-----1 እርግጠኛ አይደለሁም -----8	አዎ ከሆነ 114 ጠይቅ
313.	በአሁኑ ጊዜ የቤተሰብ ምጣኔ ዘዴ ይጠቀማሉ?	የለም-----0 አዎ-----1	
314.	ያለጃቅድ የተከሰተ/ያልተፈለገ እርግዝና አጋጥሞዎት ያዉቃል?	የለም-----0 አዎ-----1	አዎ ከሆነ 115 ጠይቅ
315.	ያልተፈለገ እርግዝና ያጋጠመዎት እንዴት ነበር?	ስለ የቤተሰብ ምጣኔ ዘዴ ስለማላዉቅ---1 የቤተሰብ ምጣኔ ዘዴ ባዉቅም ስለማልጠቀም-2 የቤተሰብ ምጣኔ ብጠቀምም ዘዴዉ ስላልሰራ ----- -----3	

**ስለሰጡን ጊዜ ክልብ እናመሰግናለን!!**

## **VI: Assurance of Principal Investigator**

All data needed to conduct this research was collected appropriately. All ethical considerations were obeyed in the process and all necessary advice and guidance was asked and gained from my advisor.

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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Signature: \_\_\_\_\_

Date: \_\_\_\_\_