

**ADDIS ABABA UNIVERSITY
SCHOOL OF PUBLIC HEALTH**



***ALCOHOL USE AND ASSOCIATED FACTORS DURING PREGNANCY
AT KOLFE KERANIYO SUB CITY IN ADDIS ABABA, ETHIOPIA, 2017***

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ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES
ALCOHOL USE AND ASSOCIATED FACTORS DURING PREGNANCY AT K
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List of abbreviations/ acronyms

ANC-----Ante Natal Care

AOD-----Alcohol and Other Drugs

CDC-----Center for Disease Control

FASD-----Fetal Alcohol Spectrum Disorder

EDHS---Ethiopian Demographic and Health Survey

HC-----Health Center

MSPSSf ---Multidimensional Scale of Perceived family Social Support

WHO-----World Health Organization

Abstract

Background: The use of alcohol is increasing from time to time in all segments of demographics and has become one of the rising major public health and socioeconomic problems worldwide. Alcohol use during pregnancy is associated with significant risks to the unborn child and can contribute to prenatal complications. In Ethiopia, there is expansion of alcohol use and have reached to women in their fertile age that include pregnant woman.

Objectives: The main objective of this study was to assess the magnitude and associated factors of alcohol use during pregnancy in Kolfe sub city.

Methods: Institutional based cross sectional study was conducted from April to June, 2017 in Addis Ababa, Ethiopia. A total of 380 pregnant women were selected by using systematic random sampling and included in the study. Data was collected using questionnaire. The collected data was coded and entered in the computer using Epi Data version 3.1 and the data was analyzed using SPSS for window version 20. Descriptive statistics such as frequency, proportions, means, medians and standard deviations were calculated. A binary logistic regression model was used to identify associated factors for alcohol use among pregnant women. The results were described using adjusted odds ratio with 95% confidence interval and statistical significant was considered at p value < 0.05.

Results: This study revealed that the overall prevalence of alcohol use among pregnant women was found to be 39.8%. The factors like not having formal education[AOR 95% CI=8.47(2.42, 29.62), having primary education [AOR 95% CI= 4.26(1.23, 14.74), being housewife[AOR 95% CI= 4.18(2.13,8.22), unplanned pregnancy [AOR 95% CI=2.47(1.33, 4.60), having history of abortion[AOR 95% CI=3.33(1.33, 6.05)], not having awareness on the effect of alcohol on the fetus[AOR 95% CI=4.66(2.53,8.61)], and not having family social support [AOR 95% CI= 2(1.14,3.53) were found to be significantly associated with alcohol use among pregnant women.

Conclusions and Recommendations: the study found high level of alcohol use by pregnant women at Kolfe sub city. Not having education, having primary education, being housewife, unplanned pregnancy, having history of abortion, not having awareness on the effect of alcohol on the fetus, and not having family social support are found to be predictors of alcohol use. Factors associated with alcohol use during pregnancy are essential to reduce alcohol use and its health effect.

Keywords: Alcohol, Pregnancy, Associated factors, Addis Ababa, Ethiopia

1. Introduction

1.1 Background

The use of substances such as alcohol, khat, and tobacco and other illicit drugs is higher from time to time in all segments of demographic and has become one of the growing major public health and socioeconomic problems worldwide. Alcohol accounts for 3.8% of all global deaths and 4.6% of the global burden of disease and injury. Alcohol is a major determinant of non-communicable diseases and neuropsychiatric disorders. (1-3).

According to WHO report, alcohol use can lead to illness and even to death. Alcohol misuse cause significant morbidity and mortality (particularly from injuries) and societal harm such as social disruption from crime, unemployment and marital disharmony (2, 3).

The history of psychoactive substance use in Africa is relatively short except for the reports on the use of traditional beverages such as alcohol but recent trends indicate that the use of substances and its health and societal negative impacts have dramatically increased particularly in developing countries because of socio-cultural transition, rise of availability, and other factors (1,4).

In Ethiopia, the practice of alcohol and other substance use has evolved over several years spanning from an era of purely traditional alcohol beverage(e.g. Tela, Areka, Teje) use to the recent use industrial produced alcohol beverages (e.g. Beer) and it is not culturally condemned. History shows us that, quite often, alcohol initially occupies an instrumental place in Ethiopian society, finding use and value in rituals, part of appreciation, ceremonies (e.g. Edir (mourning ceremony in Ethiopia), celebration of events), and relaxation after work, and leisure activities (4).

1.2 Statement of the problem

Alcohol use in all society, in the world and in all segments of socio demographic is very common except the variability of prevalence (3).

In pregnant woman, the negative health consequences of alcohol use are more profound for themselves as well as for the fetus because of their sensitive to outside stimuli. Alcohol consumption during pregnancy is also showed to be one of the leading causes of preventable birth defects and developmental problems including language and motor delays and poor academic achievement (5-7).

New researches indicate that even low levels of prenatal alcohol exposure can negatively affect the developing fetus. And cognitive and socio-emotional deficits among children exposed to even small amounts of alcohol are found (8). Adverse effects of prenatal alcohol exposure can range from subtle developmental problems, or fetal alcohol effects, to full-blown fetal alcohol syndrome. However, the effects of alcohol exposure are not limited to infancy and childhood; prenatal exposure to alcohol, particularly in early pregnancy, has also been found to increase the likelihood of developing an alcohol disorder in adulthood (9).

Because no universally safe level of alcohol consumption during pregnancy has been identified and given these consequences, nearly all leading health organizations, including the American Society of Addiction Medicine, the Center of Disease Control, Substance Abuse and Mental Health Services Administration, the National Organization on Fetal Alcohol Syndrome, the Office of the Surgeon General, and the American College of Obstetrics and Gynecology agree that there is no safe time or safe amount of alcohol to use in pregnancy, and recommend total abstinence for the duration of the pregnancy (10).

The rapid increase of the consumption of alcohol has been indicated. The expansion psychoactive substances, especially alcohol and chat, have reached to women in their fertile age that include pregnant woman (11).

In developed country and other parts of the world prevalence and outcome studies of alcohol use among pregnant women continue to grow as an awareness of the consequences increase and alcohol epidemics spread (12). The intervention that includes primary and secondary prevention has been done and continues to be worked specifically for fertile age groups women and pregnant woman at health institution and community level. However, in low income countries including Ethiopia assessment of alcohol use among pregnant woman as well as screening of alcohol use

and provision of intervention for pregnant women has not got a concern despite the rise of consumption of alcohol and its impact on ground for all socio demographic is from time to time (1). Therefore, in view of the above background, this study is aimed to determine magnitude of alcohol and associated factors among pregnant women at Kolfe sub city in Addis Ababa, Ethiopia.

1.3. Significance of the study

Alcohol use during pregnancy is a critical public health concern that is linked to several harmful maternal and fetal consequences. Moreover, alcohol use during pregnancy can cause social disruption from crime, unemployment and marital disharmony.

In Ethiopia, alcohol use is increasing across the country irrespective of socio demographic characteristics that includes pregnant women despite limited interventions. Still studies are minimal to inform program and policy to reduce the health and social effect to the mothers and baby. Hence this study aim to assess magnitude of alcohol use and associated factors among pregnant women in kolfe sub city. It will have significant contribution to reduce alcohol related effects by informing programmer and policy makers so as to develop targeted intervention which helps to reduce the problem and helps to improve wellbeing of children, women and the community as a whole.

2. Literature Review

2.1 Magnitude of alcohol use during pregnancy

2.1.1 Alcohol use

Alcohol use in all society, in the world and in all segments of socio demographic is very common except the variability of prevalence (3). Prevalence of alcohol during pregnancy reported 8.5% in the US (13). It has been reported that up to 1 in 100 children in the United States are born with fetal alcohol spectrum disorder (14). Furthermore, around 2 children in 1,000 are diagnosed with FAS in the US (15). A survey conducted in California reported that among women who gave birth in 2006 found that approximately 15.8% of women reported drinking during the first or third trimester of their pregnancy (16).

The epidemiological study that had been done in Canadian women found that 10.8% of women drank alcohol at some point during their pregnancies (17). European study discovered only 53% of women in France reported complete abstinence during pregnancy and an Australian study reported 81% of pregnant women consume alcohol (18, 19). Study conducted in Geneva showed that about 36.3% of the women drank at least one glass of alcohol during pregnancy (20). Screening of alcohol use in Swedish antenatal clinics for the year preceding pregnancy, explored as one-third of the subjects (30%) were continued to regular alcohol use during pregnancy, and 6% reported consumption two to four times per month (21).

A study which was conducted on one thousand pregnant Korean women who visited the department of obstetrics and gynecology in 2010 showed 16.4% of them were using alcohol during their pregnancy (22).

The prevalence of ethanol use in many Sub-Saharan African countries is high and reported to be increasing among women. Some areas of Sub-Saharan African, such as regions of South Africa, have high rates of fetal alcohol spectrum disorder (FASD). The highest fetal alcohol syndrome rate was documented in a South African community in Western Cape Province where FAS was reported to affect 40.5 to 46.4 children (23).

A study which was done in Southwestern Uganda showed maternal alcohol use during the current pregnancy was 16% (24). A study in South Africa, using urine analysis, found the prevalence of alcohol use among pregnant women attending antenatal clinics in Cape Town 19.6 % (25). A descriptive cross sectional study on Ghanaian pregnant women showed that 20.4% of them drank alcohol (26).

Some of commonly used Traditional alcohol beverages in Ethiopia with their average alcohol content are Araki, Teje, Tella and filtered Tella of 45%, 6.98% to 10.9%, (2% to 4%), and 5% to 6% respectively. shamit in guraghe, Korefe is in Begemder Province and borde are also common (27). The 2011 Ethiopia Demographic and Health Survey (EDHS) found that 45% of women reported drinking alcohol (28). Institution-based cross sectional study which was conducted in Jimma hospital, Ethiopia and a study done in dwellers of Bahirdar, Ethiopia depicted that the prevalence of alcohol use during pregnancy was 31.3% and 34% respectively (29,30).

2.2 Factors associated with alcohol use

2.2.1 Socio demographic factors for alcohol

Low income pregnant women and/or low socioeconomic status have higher vulnerability to Alcohol and other drugs use in both developed and developing country settings (31-33).

A study done in Northern Tanzania revealed the socio-demographic predictors most strongly related to alcohol consumption were religion and tribe (34).

Non-Islamic religion and not being in marital union were strong predictors of alcohol consumption in Ghanaian pregnant women (35).

A cross-sectional study South Africa showed pregnant women above the ages of 29 years old, above grade 10 and employed were less likely to use AODs. Women in a relationship were slightly more likely to use AODs than those who were single (36).

A study done on pregnant women who are dwellers of Bahirdar, Ethiopia showed being married and being unemployed were significantly associated with alcohol consumption (30).

2.2.2 Obstetric factors for alcohol use during pregnancy

A number of maternal risk factors associated with maternal alcohol consumption during pregnancy have consequently been identified. These include increased gravidity and parity as well as partners' and family members' heavy drinking patterns (37).

A study among Pregnant Women in Southwestern Uganda showed, mothers reporting pre pregnancy alcohol use had higher odds of any alcohol use during pregnancy, use during all three trimesters, and moderate/heavy consumption during any trimester. Partner alcohol use and low risk perceptions of alcohol use during pregnancy were significantly associated with use during pregnancy (38).

Unplanned pregnancies increase the risk for alcohol-exposed pregnancies in the WHO African Region (39). Unplanned pregnancy was positively associated with alcohol consumption in studies

done in South Africa and Ethiopia (30, 36).

One study has found that women with a history of induced abortion are three times more likely to use illegal drugs during a subsequent pregnancy. The study supports a growing body of evidence which suggests that later pregnancies may arouse unresolved grief over prior abortions which women may seek to suppress by increased reliance on drugs and alcohol (40).

2.2.3 Awareness of health risk of alcohol use during pregnancy

Although most pregnant women seem aware that alcohol can be harmful to their babies, they appear unwilling to heed recommendations of abstinence and many believe that some alcohol intake during pregnancy is considered acceptable (41).

Seventy-six percent of pregnant Danish women interviewed at an antenatal clinic considered alcohol intake during pregnancy acceptable (42). A similar study in France found that while only 6% of pregnant women would not consider drinking even one drink per day, 60% considered two drinks per day reasonable (43). A nationwide cross-sectional survey conducted amongst non-pregnant women in New Zealand revealed that only 44% believed no level of alcohol consumption to be safe during pregnancy (44).

Study in Australia which investigated women's knowledge and attitudes regarding alcohol use during pregnancy; found that 80.2% of women agreed that pregnant women should not consume alcohol at all whereas only 33.9% of Australian women nominated growth problems as an effect of prenatal alcohol exposure and only 15.6% nominated brain damage (45).

A prospective survey of alcohol ingestion in pregnant women in rural and urban areas of the Western Cape indicated that 59.7% of the women were aware that alcohol could be harmful to the fetus. The women were asked to explain the effect on the fetus of each particular alcohol they mentioned. It was found that 35.6% the significant drinkers had a degree of insight, ranging from minimal to excellent knowledge; of the potential teratogenic effects of alcohol. In contrast, only 8% of the women who reportedly did not drink or, only drank minimal amounts of alcohol indicated any insight in this regard (23).

Insufficient public health resources and lack of knowledge about the effects of alcohol increase the risk for alcohol-exposed pregnancies in the WHO African Region (39). In a study of pregnant women in Ghana, it was reported that 22% of respondents were unaware of the detrimental health effects of alcohol consumption during pregnancy and 45% of respondents had never received education on the effects of alcohol on either the mother or the fetus (26).

Regarding social support, researches showed that the lack of social support during pregnancy and the use of alcohol and other substances (46) Another study depicts that lack of social support have been shown to be important mediators for the development of depressive symptoms and the use of alcohol and drugs (47). But the other study reports that social support is not predictive of prenatal alcohol use (48)

Conceptual frame work

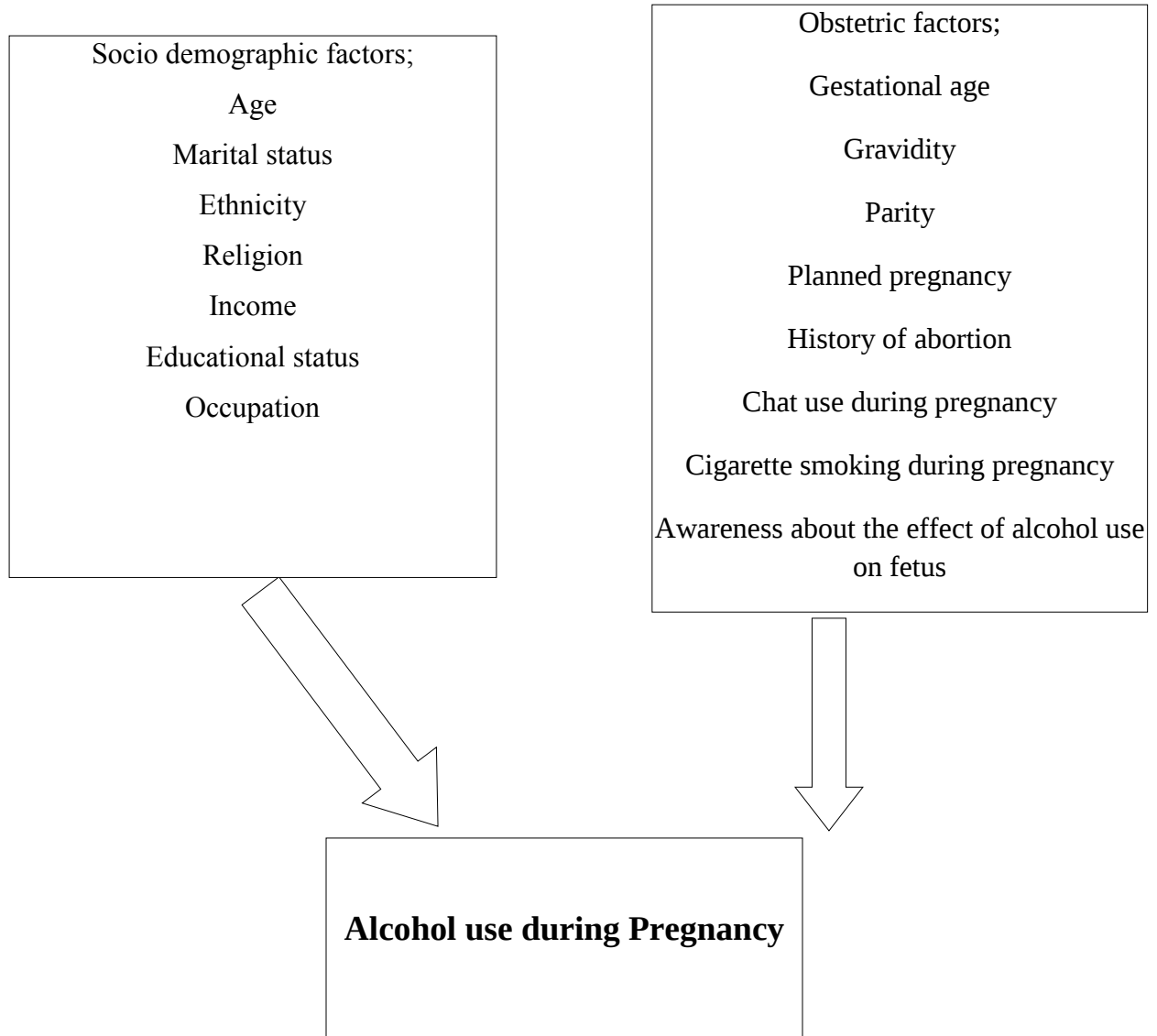


Figure 1. Conceptual frame work which is adapted from different literatures

3. Objective

3.1 General objective

To assess the magnitude and associated factors of alcohol use among pregnant women at Kolfe sub city in Addis Ababa, Ethiopia, 2017

3.2 Specific objectives

3.2.1. To determine the magnitude of alcohol use among pregnant women's at Kolfe sub city

3.2.2. To identify factors associated with alcohol use during pregnancy at Kolfe subs city

4. Methods

4.1 Study area and period

The study was conducted at kolfe keraniyo sub city which is one of the ten sub cities in Addis Ababa, Ethiopia. It has a total area of around 6510.4 hectare and it borders with Oromia in the north, south and west, Lideta sub city in the east, Addis Ketema and Gulele sub city in the north east, Nifasiklafto sub city in the South east. It has a total population of 537, 786. Among these, about 2.33 % (12,531) of them are pregnant women. The sub city has eleven Health Centers (HCs) which serve primary care to the populations concerned. The study was conducted from May to June 2017 E.C.

4.2. Study design

An institutional based cross- sectional study was conducted to assess the magnitude and associated factors of alcohol use among pregnant women.

4.3. Population

4.3.1. Source population

All pregnant women attending the antenatal care follow up clinic at primary health centers in Kolfe Keraniyo sub city, Addis Ababa Ethiopia. .

4.3.2. Study population

Pregnant women attending the antenatal care follow up clinic of selected primary health care centers at kolfe sub city in Addis Ababa during study period

Inclusion criteria

Pregnant women attending the selected health centers during study period

Women's willing to give informed consent

Women in all trimesters

Exclusion criteria

Pregnant women who are seriously ill during the study period

4.3.3. Sample size determination and sampling technique

4.3.3.1. Sample size determination

The sample size for this study was determined by using a formula for single population proportion. There was a study done on prevalence of alcohol and associated factors during pregnancy in Bahirdar town, with prevalence of alcohol use 34% (30). Therefore, 34 % proportion was taken with 95% confidence interval and 5% margin of error (d), the sample size was calculated as

follows.

$$n = z^2 pq / d^2$$

n= number of sample size

Z= confidence interval (CI) =95%=1.96

P= population proportion of Alcohol use among pregnant women i.e. 34%= 0.34(42)

q=1-p; q=1.0-0.34=0.66

w= level of precision (margin of sample error tolerated) =5%=0.05

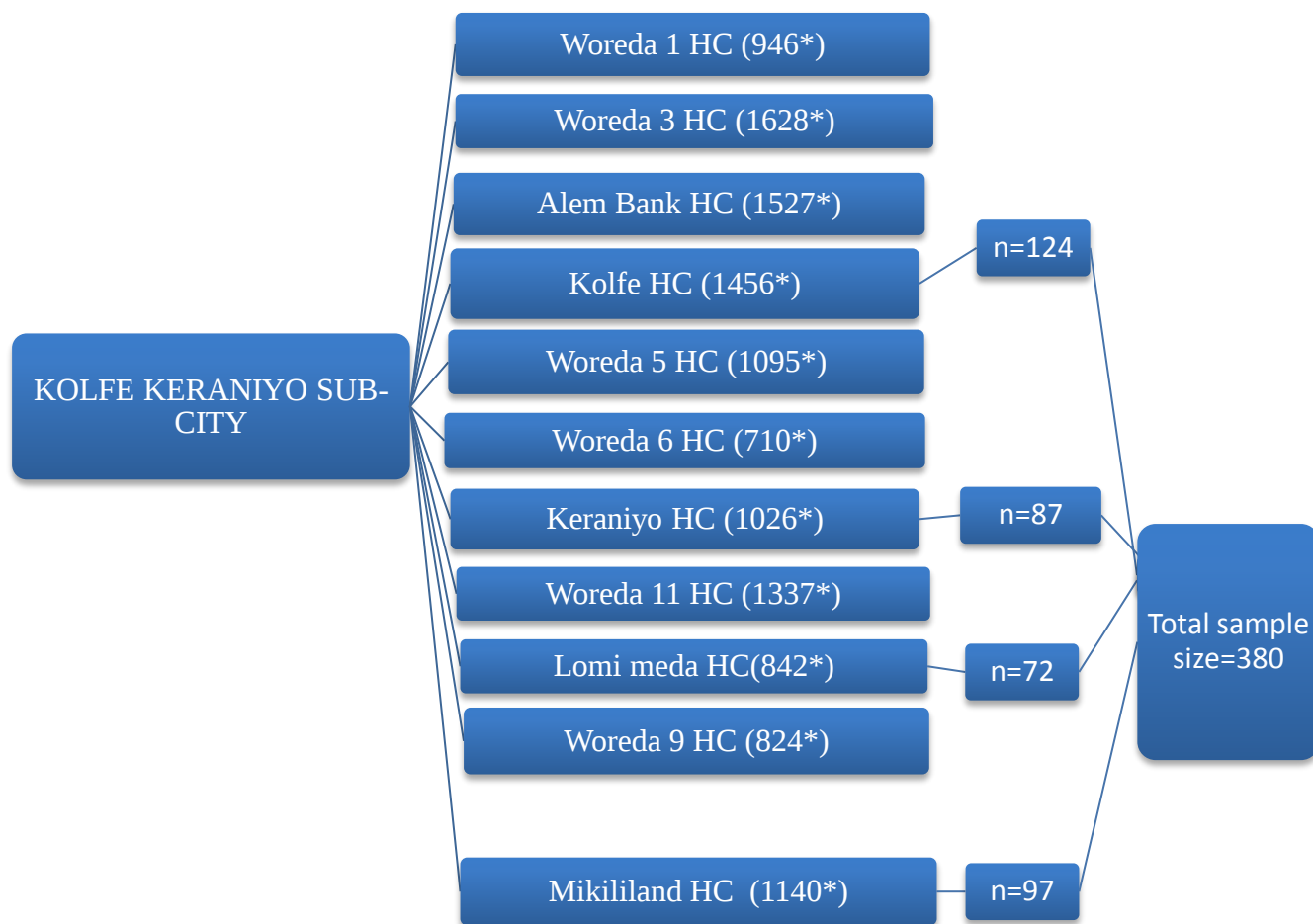
$$= \frac{(1.96)^2 (0.34) (0.66)}{(0.05)^2} + 10\% = 380$$

So, n= 380

The minimum sample size calculated is 345 adding the considered non response rate of 10% the total sample size is 380

4.3.3.2. Sampling technique

Two stage sampling technique was used which are simple random sampling and systematic random sampling. Simple random sampling technique was conducted to select 4 HCs from the 11 HCs of the kolfe sub city. Sample size at the selected HC was allocated proportionally to size of pregnant women at each selected HC. Study participants from each selected HC were taken by systematic random sampling. The participants were selected by using “K” interval of 11 from each of the four health centers of kolfe sub city.



Note: * is the number of pregnant women in the catchment area

Figure 1: Schematic presentation of sampling procedure of pregnant women in Kolfe Keraniyo sub city, Addis Ababa, Ethiopia December 2016.

4.4. Study Variables and operational definitions

4.4.1 Dependent variable

Alcohol use during pregnancy

4.4.2. Independent variables

- Socio demographic; age marital status, ethnicity, religion, average monthly income, educational status, occupation
- Obstetric; Gestation in weeks, gravidity, parity, planned pregnancy, history of abortion
- Smoking ,chat use during pregnancy
- Awareness regarding the effect of alcohol uses on fetus; has awareness, has no awareness
- Family social support; Has Family social support, Has no family social support

4.4.3. Operational definition

- ❖ **Alcohol:** a drink containing ethanol. Both home brewed as well as fabricated alcoholic beverages.
- ❖ **Traditional alcohol:** home brewed alcohol in Ethiopia that include (e.g. Tela, Teje, Areka
- ❖ **Alcohol use-** any unit of alcohol use during period of pregnancy.
- ❖ **Chat use-** any amount of chat use during pregnancy period
- ❖ **Cigarette smoking-** smoking history of cigarette during pregnancy period even for once
- ❖ **Has Awareness about the effect of alcohol use on fetus** – if respondents answered correctly for six (all) questions that describe about the effect of alcohol use on fetus.
- ❖ **No awareness about the effect of alcohol use on fetus** – if respondents answered incorrectly for six questions that describe about the effect of alcohol use on fetus.
- ❖ **Not having Family social support-** if respondents scored less than or equal to 14 from Multidimensional Scale of Perceived family Social Support (MSPSSf) 7 likert scale
- ❖ **Having family social support-** if respondents scored greater than 14 from Multidimensional Scale of Perceived family Social Support (MSPSSf) 7 liker scale

4.5. Data collection questionnaire and procedure

Data was collected through a face to face interview using structured questionnaire, which is adapted different literatures and modified according to the local context. The questionnaire was prepared initially in English and translated to Amharic then back to English to check consistency of the questions. Four (BSC) nurses with BSc degree qualification were recruited as data collectors

and two public health professionals as supervisors to assist the data collection process. Training was given for three consecutive days prior to data collection to the supervisors and data collectors on the objective of the study, the questions and extent of explanations, and the way to keep privacy and confidentiality.

4.6. Data quality control issues

Back ward and forward translation of questionnaire by translator was employed to assure same meaning is conveyed. Training was given to the data collectors and supervisors about the data collection tool, way of interviewing, the ethical principles of confidentiality and data management prior to their involvement with data collection for three days. Supervision was held regularly during data collection period. The collected data was checked on daily basis for completeness and consistence. Manual and computerized data cleaning was done before data analysis.

4.7. Data processing and analysis

The coded Data was checked, cleaned and entered into Epi.DATA 3.1 versions and then exported into Statistical Package for the Social Sciences (SPSS) window version 20 for analysis. Descriptive summary using frequencies, percentage, graphs, mean and standard deviation was used to present study results. Bivariable analysis was done for crude odds ratio (COR) and multivariable analysis was employed to calculate adjusted odds ratio (AOR) to identify independent predictors of outcome variable. Variables which met $p\text{-value} < 0.2$ during Bivariate analysis were exported to multivariable analysis model. . The finding was described with Odds ratio (crude and adjusted) with corresponding 95% Confidence interval. P-value of < 0.05 was considered as statistically significant during the final multivariable logistic regression model.

4.8. Ethical considerations

Ethical clearance was obtained from Addis Ababa university spublic health school ethical review committee. Both written and verbal informed consent was obtained from participants. They were informed that Participation is based on voluntary bases and have full right to withdraw at any time during the interview process. Moreover, the researcher was striving to protect and to respect the privacy, secrecy and wellbeing of persons with these conditions. The data's which is collected for the purpose of this study not contained identifying information, thus ensuring the secrecy of the participants. All the data collected used for the purpose of this study only.

4.9. Plan for dissemination and Utilization of Results

The results of the study will be communicated and submitted to Kolfe sub city, Addis Ababa University, school of public health and other responsible bodies. The result will be presented during thesis defense, as a partial fulfillment for master of public health and will be presented to different national or international conferences. Moreover, the findings of the study will be published and disseminated through peer reviewed journals as scientific publication.

5. Results

5.1. Description of socio-demographic characteristics

The response rate of this research was 96.58%. Out of 367 pregnant women, 74.7% (274) were married women. Two hundred sixty (70.8%) were non-educated and women having above secondary education were 26 (7.1%). The mean age of respondents was $27.43 \pm SD4.775$ years (ranging from 15-49). Regarding to age distribution of pregnant women were highly distributed in the category of (25-29) years old were 117(31.9%), and the least age range was 15-19 years old which was 8 (2.2%).

Among the total respondents in ethnicity 114 (31.1%) were Amhara and 107(29.2%) were Oromo, 91(24.8%) were Gurage, 32(8.7%) were Tigrie and the remaining 23(6.3%) were from other ethnics' like Silita, Sidama, Wolayita and others. Of the participants in religious background 117(48.2%) were followers of orthodox, 131(35.7%) Islam, 40(10.9%) Protestant, 10(2.7 %) catholic, and 9(2.5%) were followers of other religions.

The majorities of pregnant women 156(42.5%) were house wife which was followed by some form of employment 105(28.6%). Majority of pregnant women 109(29.7%) has an average monthly income between1001-2000 ETB.

Table 1: distribution of socio-demographic characteristics of the respondents among pregnant women at Kolfe sub city (n=367) in Addis Ababa

Variables	Frequency	Percent (%)
Age		
15-19	8	2.2
20-24	100	27.2
25 -29	117	31.9
29-34	106	28.9
>35	36	9.8
Mean (SD)	27.43±4.775	
Marital status		
Married	247	67.3
single	81	22.1
Divorce	31	8.4
Widowed	8	2.2

Ethnicity

Amhara	114	31.1
Oromo	107	29.2
Gurage	91	24.8
Tigrie	32	8.7
Others	23	6.3

Religion

Orthodox	177	48.2
Islam	131	35.7
Protestant	40	10.9
Catholic	10	2.7
Others	9	2.5

Educational status

Not educated	127	34.6
Primary educated	123	33.5
Secondary educated	91	24.8
Above Secondary educated	26	7.1

Job (Occupation)

Employed	105	28.6
Housewife	156	42.5
Own business	106	28.9

Average monthly income of the house hold

≤ 1000 Birr	44	12
1001-2000	109	29.7
2001-3000	76	20.7
3001-4000	61	16.6
>4000	77	21

5.2. Assessment of obstetric history of respondents

As illustrated in table 2 below, the majority of the pregnant women 148(40.3%) were in the second tri-minister (between 3-6 months) followed by 131(35.7%) of pregnant women which were found in third tri-minister (>6 months). Many of pregnant women have one alive children 112(30.5%), and almost three quarter 268(73%) of the pregnant women had planned for current pregnancy. Two hundred fifty one (68.4%) of pregnant women have no history of abortion.

Table 2: Distribution of obstetric history of the respondents among pregnant women at kolfe sub city (n=367) in Addis Ababa, 2017.

Variables	Frequency	Percent (%)
Gestational age of participant		
< 3 months	38	10.4
3-6 months	148	40.3
>6 months	131	35.7
Number of pregnancy(gravidity)		
First time	88	24
Second time	148	40.3
>_ three times	131	35.7
Number of alive children		
No child	112	30.5
One	134	36.5
Two	65	17.7
>two	56	15.3
Plan of current pregnancy		
Yes	268	73
No	99	27
History of abortion		
Yes	116	31.6
No	251	68.4

5.3. Alcohol use during pregnancy

As illustrated in table 3 below, 146(39.8%) were drinking alcohol during pregnancy predominately Tella (traditional alcohol beverage) 65 (44.4%), and many of them 54 (37.2%) were used alcohol 2-4times per month while 15 (10.3%) of pregnant women use four and above times per week. And 179 (48.8%) had used alcohol before pregnancy.

Thirty nine (10.6%) of the pregnant women were using chat during pregnancy period. Only 10 (2.7%) of pregnant women were smoke cigarette during pregnancy.

Table 3: Distribution of alcohol use among pregnant women at kolfe sub city (n=367), in Addis Ababa, 2017.

Variables	Frequency	Percent (%)
Alcohol use before pregnancy		
Yes	179	48.8
No	188	51.2
Alcohol use during pregnancy		
Yes	146	39.8
No	221	60.2
Frequency of alcohol use during pregnancy		
<_ once a month	36	24.1
2-4 times per month	54	37.2
2-3times per week	41	28.3
4 and above per week	15	10.3
Type of alcohol use		
Tela	65	44.4
Teje	9	6.3
Areka	14	9.7
Beer	41	28.5
Wine	9	6.3
Others	7	4.9
Cigarette smoking during pregnancy		
Yes	10	2.7
No	357	97.3
Chat use during pregnancy		
Yes	39	10.6
No	328	89.4

5.4. Awareness of the effect of alcohol use on fetus among pregnant women

Two hundred forty four (66.5%) pregnant women have awareness about the effect of alcohol on fetus and from these 69 (28.28%) of them use alcohol whereas from the total pregnant women 123(33.5%) were not having awareness about the effect of alcohol on fetus and from theses 76 (62.6%) were use alcohol.

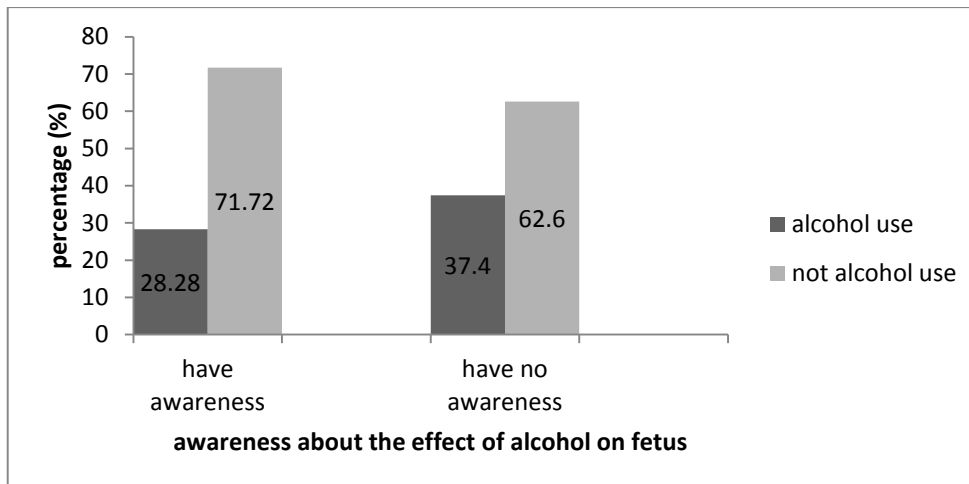


Figure 2: Distribution the magnitude of alcohol use among pregnant women of having awareness and not having awareness about the effect of alcohol on fetus at Kolfe sub city (n=367), Addis Ababa, 2017.

5.5. Assessment of family social support of respondents

In the assessment of family social support of out of 367 subjects using Multidimensional Scale of Perceived family Social Support (MSPSSf) more than a half 244 (66.5%) scored greater than or equal to the mean.

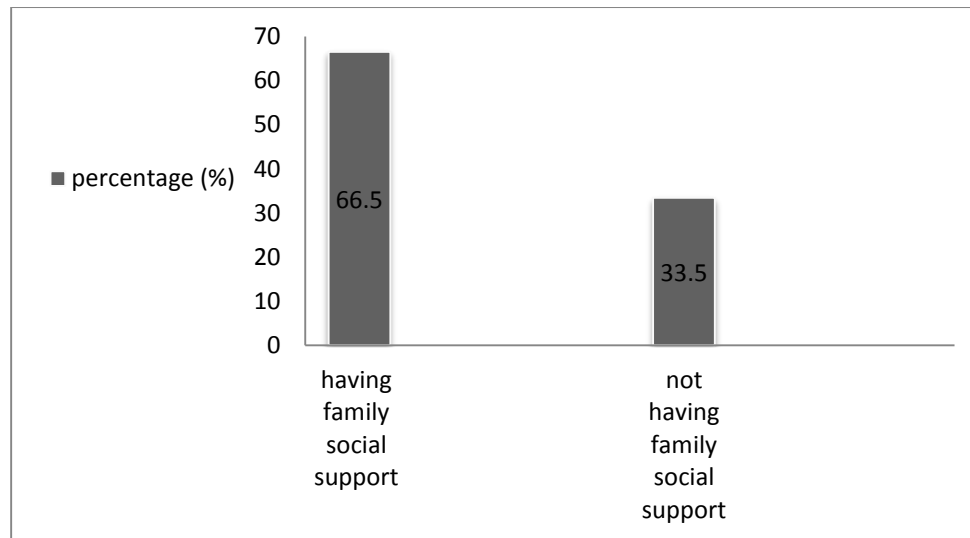


Figure 3. Distribution of family social support of among pregnant women at Kolfe Sub city (n=367), in Addis Ababa 2017.

5.6. Prevalence of alcohol use among pregnant women

The overall prevalence of alcohol use among pregnant women in kolfe sub city health centers was found to be 39.8%.

5.7. Factors associated with alcohol use among pregnant women attending kolfe Sub-city health centers

After adjusting for possible covariates, educational status, occupation, plan of pregnancy, history of abortion, awareness about the effect of alcohol on fetus, and family social support of pregnant women were significant predictors of alcohol use among pregnant women with $p\text{-value} < 0.05$. Statistically significant higher rate of alcohol use was seen among non-educated pregnant women and primary educated compared to pregnant women who have secondary education and above with these (AOR 95%CI= 8.47(2.42, 29.62) and AOR 95%CI= 4.26(1.23, 14.74) respectively. pregnant women who were in the some form of occupation appeared to have a decreased risk of alcohol use compared to those who were housewife where the risk of alcohol use was four fold which is statistical significant (AOR 95% CI=4.18(2.13,8.22). Respondents who have had

unplanned current pregnancy had a twofold risk of alcohol use than who had planned pregnancy (AOR 95% CI=2.47(1.33, 4.60).

Those pregnant women that had history of abortion had experienced three fold risk for alcohol use compare to pregnant women who haven't history of abortion [AOR 95% CI=3.33(1.33, 6.05)]. In addition, for awareness variable, women who answered correctly (aware) about the effect of alcohol on fetus showed to be protective for alcohol use compared to those answered incorrectly which become risk factor for alcohol use[AOR 95% CI= 4.66(2.53,8.61)]. Moreover, the study found a relationship between family social support and alcohol use that pregnant women who had no family social support were two fold risks for alcohol use [AOR 95% CI= 2(1.14,3.53) compare to those who had family social support.

Table 4: Factors associated alcohol use of pregnant women at kolfe sub city (n=367) in Addis Ababa, 2017.

Variables	Alcohol use during Pregnancy			
	Yes	No	Crude OR (95% CI)	Adjusted OR (95% CI)
Religion				
Orthodox	76	101	-----	-----
Islam	43	88	0.65 (0.41,1.04)	1.25(0.42,2.13)
Protestant	24	16	1.99(0.99,4.01)	3.01(0.96,5.02)
Catholic	2	8	0.33(0.69,1.61)	0.23(0.11, 1.71)
Others	1	8	0.166 (0.02,1.360)	7.09 (0.68, 18.4)
Educational status				
Not educated	65	62	4.40(1.56,12.40)	8.47(2.42,29.62)*
Primary education	61	62	4.13(1.47,11.66)	4.26(1.23,14.74)*
Secondary education	15	76	0.83(0.27,2.54)	1.41(0.38,5.23)
Above secondary education	5	21	-----	-----
Occupation				
Employed	34	71	-----	-----
housewife	87	69	2.63(1.57,4.41)	4.18(2.13,8.22)*
own business	25	81	0.65(0.35,1.18)	0.76(0.35,1.66)
Planned pregnancy				
Yes	85	183	-----	-----
No	61	38	3.46(2.14,5.58)	2.47(1.33,4.60)*

Gestational age					
< 3 months	21	17	1.41(0.69,2.85)	1.01(0.49,5.11)	
3-6 months	46	114	0.46(0.29,0.73)	0.81(0.12,3.00)	
>6 months	79	90	-----	-----	
Number of pregnancy					
First time	32	56	-----	-----	
Second time	56	92	1.06(0.61,1.84)	1.77 (0.51, 7.42)	
>_ three times	58	73	1.39(0.79,2.42)	3.53 (0.85, 14.43)	
History of abortion					
Yes	66	50	2.82(1.79,4.44)	3.33(1.33, 6.05)*	
No	80	171	-----	-----	
Awareness					
Having awareness	69	175	-----	-----	
Not having awareness	77	46	4.25(2.68,6.72)	4.66(2.53,8.61)*	
Family Social support					
Have no family social s upport	65	58	2.25(1.45,3.51)	2(1.14,3.53)*	
Have family social sup port	81	163	-----	-----	

Note. * refers association OR=Odds ratio CI=Confidence Interval

6. Discussion

The overall prevalence of alcohol use of pregnant women was 39.8% that met use of alcohol at least once during the current pregnancy period. In Ethiopian community based study, the estimated prevalence in the 2011 Ethiopia Demographic and Health Survey (EDHS) was 45% of alcohol use during pregnancy (28). The prevalence of alcohol use reported in the current study among pregnant women is higher than research conducted in Jimma hospital and bahirdar dwellers in Ethiopia which is 31.3% and 34% respectively (29, 30). The possible reason could be time of study; population variation and study design particularly for Bahirdar dwellers which was population based study. The prevalence of current study is also higher than those of other African and western countries a study done in Southwestern Uganda showed maternal alcohol use during the current pregnancy was 16% (24), in South Africa women attending antenatal clinic at cape town 19.6% (25), Ghanaian pregnant women showed that 20.4% (26), and a study conducted in Geneva showed that about 36.3% of the women drank at least one glass of alcohol during pregnancy (20). The discrepancy observed might be because of type of alcohol, awareness and perception about the effect of alcohol on fetus.

The demographic characteristic of the pregnant women shows that there was a statistically significant association between being non formal education and risk of alcohol use which was in line with finding with previous studies (28, 29). The women who are non-educated might be unaware about the effect of alcohol use on fetus and on them.

Occupation was significantly associated with risk of alcohol use. Being housewife is risky for alcohol use compare to being employed and working own business which was also in lined with other studies (30, 36). It could be explained by; housewife may have been more dependent on spouse, engagement in preparing traditional alcohol beverages and ceremonies.

The finding in this study that pregnant women with no awareness about the effect of alcohol on fetus experienced higher levels of alcohol use than pregnant women having awareness is also supported by previous research (26, 39). Other factor associated significantly with alcohol use of pregnant women in this study was family social support. Not having social support is a predictive of alcohol use which is consistent with many studies (46 and 47) but in contrast to the other study in Boston, Massachusetts (48).

Moreover, this finding provides strong evidence that from obstetric factors a woman having unplanned pregnancy and history of abortion reported more alcohol use which is in line with

finding of other literatures (30, 34 & 39) and (40) respectively. The possible reason could be related with grief about the previous abortion and psychological and physiological effect of abortion which eventual may cause distress and alcohol use.

This study found no association between women age, gestational age of participant, gravidity, and ethnicity, number of alive children, religion, average monthly income, previous alcohol use of pregnant women, chat use, cigarette smoking, and/with alcohol use of pregnant women unlike some previous studies where those variable differences were observed (31, 32, & 34).

7. Strength and Limitations of the study

Strength

Careful data management and processing was used

Limitation

Since the study design was a cross sectional, it would be very difficult to draw conclusions about the relationship/ does not permit causal interpretations

8. Conclusions and Recommendations

8.1. Conclusion

This finding observed that higher prevalence alcohol use among pregnant women in kolfe sub city. Not being educated, being housewife, unplanned current pregnancy, having history of abortion, not having awareness on effect of alcohol on fetus and not having family social support were associated with alcohol use of pregnant women. This study found no association between women age, gestational age of participant, gravidity, and ethnicity, number of alive children, religion, average monthly income, chat use, cigarette smoking, and alcohol use of pregnant women.

8.2. Recommendations

Based on the finding of this study the following important recommendations are forwarded for the respective bodies.

For Federal minster of health

- The ministry of health should have to develop guidelines which help to detect alcohol use during pregnancy.
- Interventions should be developed that have a focus on the health and well-being of the pregnant women and her child—for example, interventions that focus on awareness creation about alcohol use during pregnancy, family social support and the consequences of abortion
- Develop and disseminate educational materials and advertisement on dangers of alcohol use during pregnancy
- Strengthening family planning policy and services to reduce unplanned pregnancies and abortion

For kolfe sub city health office, health centers and health workers

- Scheduled and ongoing awareness creation about the effect of alcohol on fetus during pregnancy
- family education programme should be strengthened that helps to cope stress, empowering pregnant women with knowledge, and strengthen family social support
- Decreasing unplanned pregnancy should be strengthening in health facility as well as at community. Moreover, rather than exclusively targeting antenatal care, alcohol use screenings and family social support assessments for diagnosis of problems early and intervention should be carried out.

For researchers

- Future work should be directed at specific alcohol by further characterizing type and amount of alcohol to reach at diagnosis of hazardous use and/harmful and/dependency use of alcohol.

Annex

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Annex II. Questionnaire

Information Sheet

Information Sheet, Consent Form and Questionnaires for pregnant women (English version)

Introduction: Hello! Sir/Madam my name is _____ and I came from _____.

This letter serves to ask consent from you to take part in this research. Studies in other countries shows alcohol use during pregnancy has increased which led to negative health consequences to the mother and fetus. This study is intended to assess the magnitude and associated factors of alcohol use during pregnancy at Kolfe sub city which is expected to forward valuable recommendations.

Procedures:

We invite you to participate in this project. If you are willing to participate in this project, you need to understand and sign the agreement form. Then after, you will be interviewed by the data collector. You do not need to write your name or to tell your name to the data collector and your response and the results obtained will be kept confidentially by using coding system whereby no one will have access to your response.

Risk/Discomfort:

By participating in this research project, you may feel that it has some discomfort especially on wasting time about 15 minutes. We hope you will participate in the study for the sake of the benefit of the research result. There is no risk in participating in this research project.

Benefits/incentives:

If you participate in this project, there is no direct benefit or payment to you but your participation is likely help us to meet the research objective. Ultimately, this will help us to improve service for care givers and the community as a whole.

Confidentiality:

The information collected from this research project will be kept confidential. Information will be stored in a file, without your name, only code number is used. it will not be revealed to anyone except the principal investigator and it will be kept locked with key.

Right to refuse or withdraw:

You have full right to refuse from participating in this research. You can choose not to respond to some or all question if you do not want to give your response. You have also full right to withdraw from this study at any time you wish without losing any of your right.

Name of investigator: MaeregFekade

Tel: 0925401241

Name of advisor:sefoniasGetachew(MPH, PhD candidate)

Tel.0912049682

Are you voluntary to participate in the interview? Yes

☐

No

☐

CONSENT TO PARTICIPATE:

I have read and understood the content of this document. I consent to participate in the study described above; I understand that I may withdraw this consent at any time without any effect on my care.

Signature of Participant_____ Date _____

Name and signature of supervisor _____Date_____

Name and signature of data collector _____Date_____

Questionnaire in English version and Amharic version

Section 1 questions regarding socio demographic characteristics

No	Question	Responses	Remark
1.1	age in years	-----	
1.2	Marital status	1. married 2. single 3.Divorced 4.Widowed	
1.3	Ethnicity	1.Amhara 2.Oromo 3.Tigre 4.Gurage 5.Other	
1.4	Religion	1.Orthodox 2.Protestant 3.Muslim 5.Others	
1.5	Educational status	1.Illiterate 2.Read and write 3.Primary school 4.Secondary school 5.diploma	

		6.degree 7.above degree	
1.6	Occupation	1.employed 2. housewife 3.own business 4. student	
1.7	Average monthly income of the household	-----	

Section 2. Questions regarding obstetric history and others

2.1.	Gestational age	1.First trimester 2.Second trimester 3.Third trimester	
2.2.	How many pregnancies have you had, including your current pregnancy?	1.one 2.two 3.three or more	
2.3.	Number of alive children you have?	1.one 2.two 3.three or more	
2.4.	Is the current Pregnancy planned?	1.yes 2. no	
2.5.	Have you had an abortion before this pregnancy?	1.Yes 2.No	

Section 3. Questionnaire regarding alcohol use

3.1	Have you ever consumed alcohol?	1.yes 2.no	
-----	---------------------------------	---------------	--

3.2	Have you ever consumed alcohol during the current pregnancy?	1.yes 2.no →	If no go to queue. 3.6
3.3	If yes, to ques.no 3.2 How often do you have a drink containing alcohol?	1. less than or equal to once a month 2. 2-4times per month 3. 2-3times per week 4. 4 and above 4 times per week	
3.4	What is the common alcoholic beverage that you take?	1.Tella 2.Tej 3.Areki 4.Beer 5.Wine 6.Whisky 7. Other, specify.....	
3.5	Have you ever chew chat during your pregnancy?	1.yes 2.no	
3.6	Have you ever smoke cigarettes during the current pregnancy?	1.yes 2.no	

Section 4. Questions regarding awareness about the effect of Alcohol use on fetus during pregnancy:

- | | | |
|------------------------------------|-------|-------------|
| 4.1. Has no effect on the baby | Agree | Don't agree |
| 4.2. Should be stopped completely | Agree | Don't agree |
| 4.3. Can be good for the pregnancy | Agree | Don't agree |

4.4. Can be used occasionally Agree Don't agree

4.5. Can be used after you are a certain number of months pregnant Agree Don't agree

4.6. Do you think problems can arise in the baby if you drink alcohol during pregnancy? p
 Yes.....no

Section 5. Assessment of perceived family social support by using The Multidimensional Scale of Perceived Social Support (MPSSf)

Questions	Very strongly disagree (1)	Strongly disagree (2)	Mildly disagree (3)	Neutral (4)	Mildly agree (5)	Strongly agree (6)	Very strongly agree (7)
5.1. My family really tries to help me							
5.2. I get the emotional help & support I need from my family							
5.3. I can talk about my problems with my family							
5.4. My family is willing to help me make decisions							

የእርጉዝ እናቶች መረጃ ቅጽ እና የተሳትፎ ማረጋገጫ

የአማርኛ ትርጉም

መግቢያ፡- እንደምን አደሩ/ዋሉ ጌታ/እመቤቴ ስሜ ----- የመጣሁት-----

በኮልፌ ጤና ጣቢያዎች እርግዝና ጊዜአቸው ላለቸው ጤንነት በሚከታተሉበት ጊዜ በዚያውም እንደ አልኮልና መጠቀማቸውን እና ተዛማጅ ምክንያቶችን ለማጥናት የተዘጋጀ መረጃና የስምምነት ውል ቅጽ፡፡ በሌላ አገር ያሉ ጥናቶች እንደሚያመለክቱት እንደማንኛውም ሰው አልኮል፣ ጫት፣ ሲጋራ እና ሌሎችን እያቸን ብዙዎቹ እርጉዞችም መጠቀማቸውን የሚመለከት ጥናት ታይቷል በዚህም ምክንያት በሽሉ ላይም ሆነ በናትዮው ላይ የጎንዮሽ ጉዳቱ የከፋ ሁኖ ይታያል፡፡

ይህ የመረጃና የስምምነት ውል ቅጽ የተዘጋጀው እርስዎ ተሳታፊ እንዲሆኑ ስለተጋበዙበት በምርምር ቡድኑ የሚካሄደውን ጥናት በተመለከተ የእርስዉን ፈቃደኝነት ለማወቅ ነው፡፡

በዚህ ጥናት ተሳታፊ በመሆንዎ ምክንያት ምንም አይነት ጉዳት ወይም በቀጥታ ሊያገኙት የሚችሉት ጥቅም ባይኖርም የእናቶችን እና የፅንሱን ጤንነት ለመጠበቅ በተመለከተ ወደፊት የጤና አገልግሎት ለማሻሻልም ሆነ ጠቃሚ ሀሳቦችን ለመሰንዘር ጠቃሚ ነው፡፡

ለዚህ የጥናት ፕሮጀክት የሚሰበሰበው መረጃ የግል ጉዳዮችን ያላካተተ በመሆኑ ማን ምን መልስ እንደሰጠ ሚስጢር እንዲሆን ጥንቃቄ ተደርጎበታል ፡፡ ለዚህም ሲባል በመጠየቁ ላይ ስምም ሆነ የመታወቂያ ቁጥር መፃፍ አያስፈልግም፡፡ በዚህ ጥናት ያለመሳተፍ መብትዎ ሙሉ በሙሉ የተጠበቀ ነው፡፡ ለጥያቄዎች በሙሉ ወይም በከፊል መልስ አለመስጠት ይችላሉ እንዲሁም በማንኛውም በፈለጉት ሰዓት ማንኛውንም መብትዎን ሳያጡ የማቋረጥ ሙሉ መብት አልዎት፡፡ በዚህ ጥናት ለመሳተፍ ፈቃደኛ የሚሆኑ ከሆነ ተሳታፊ በመሆንዎ በጣም ደስተኞች ስንሆን የጥናቱን አላማ በግልጽ እንዲረዱና የስምምነት ዉሉን እንዲፈጽሙልን እንፈልጋለን፡፡ በዚህ መሰረትም መረጃ ሰብሳቢዎች መጠየቅ በመጠየቅ መሙላት ይሆናል፡፡ መጠቁን ለመጨረስ ቢበዛ 15 ደቂቃ ይወስድብዎታል፡፡

የበለጠ መረጃ ለማግኘት የሚፈልጉ ከሆነ የከተለውን አድራሻ ማግኘት ይችላሉ እና ማንኛውም ጥያቄ ቢኖርዎት ከዚህ በታች የተጠቀሰውን ግለሰብ ማግኘትና መጠየቅ ፡፡

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ስልክ ቁጥር፡0912049682

በቃለመጠይቁ ላይ ለመሳተፍ ፍቃድዎ ነው? ☐ አዎ ☐ አይደለም
የተሳትፎ ማረጋገጫ

የሰነዱን ይዘት አንብቤ የተረዳሁ ሲሆን በዚህ ምርመር ፕሮጀክት ላይም ለመሳተፌ ፍቃደኛ ሆኛለሁ፡፡ በማንኛውም ሰዓት የማግኘትን የጤና አገልግሎት ሳላጣ ከጥናቱ ራሴን የማግለል መብት እንዳለኝ ተረድቻለሁ፡፡

የተሳታፊ ፊርማ _____ ቀን _____
የሱፕርቫይዘር ስም እና ፊርማ _____ ቀን _____
የዳታ ሰብሳቢ ስም እና ፊርማ _____ ቀን _____

ክፍል አንድ፡ የማህበራዊና አኗኗር መረጃዎች

ቁጥር	መጠይቅ	የክድ ካታላሪ
1.	እድሜሽሽ ስንት ነው ?	-----
2.	የጋብቻ ሁኔታሽ?	1. አግብታ አንድ ላይ የምትኖር 2. ያላገባ 3. የፈታች 4. የሞተባት
4.	ብሔርሽ ምንድን ነው?	1. አማራ 2. ኦሮሞ 3. ትግሬ 3. ጉራጌ 4. ሌሎች ይጠቀስ.....
5.	ሀይማኖትሽ ምንድን ነው?	1. ኦርቶዶክስ 2. ፕሮቴስታንት 3. ሙስሊም 4. ሌሎች
6.	የትምህርት ደረጃ ?	1. ያልተማረ/ማንበብና መጻፍ የማትችል/ 2. ማንበብና መጻፍ የምትችል 3. አንደኛ ደረጃ የተማረች 4. ሁለተኛ ደረጃ የተማረች 5. ድፕሎማ 5. የመጀመሪያ ድግሪ 6. ከመጀመሪያ ድግሪ በላይ
7.	ስራሽ ምንድን ነው?	1. ተቀጣሪ 2. የቤት እመቤት 3. የራስ ስራ 4. ተማሪ
8.	ወርሃዊ የቤተሰብ ገቢሽ ምን ያህል ብር ነው?	-----

ክፍል ሁለት፡ አሁን ደግሞ የወለድ ታሪክዎን እጠይቀዋለሁ።

2.1	የእርግዝና ወራትሽ ስንት ነው?	1. ከሦስት ወር በታች 2. ከሦስት አስከ ስድስት ወር 3. ከስድስት ወር በላይ	
2.2	የአሁኑን ጨምሮ ስንት ግዜ አርግዘል?	1. ይህ የመጀመሪያየ ነው 2. ሁለት ጊዜ 3. ሦስትና ከሦስት በላይ	
2.3	በህይወት የሚኖሩ ስንት ልጆች አሉሽ ?	1. አንድ 2. ሁለት 3. ሦስትና ከዚያ በላይ	
2.4	የአሁኑ እርግዝና ታስቦ ት ነው የተረገዘው?	1. አወ 2. የለም	
2.5	ከዚህ በፊት የፅንሰ ውርጃ አጋጥሞሽ ያውቃል?	1. አዎ 2. የለም	

ጥያቄ.3 አሁን ደግሞ በህይወት ጊዜዎ እና በአሁኑ እርግዝና ወራትዎ ስለ አልኮል ተጠቃሚነትዎን ስለመጠየቅ፡፡

3.1	በህይወትሽ / ከእርግዝና በፊት አልኮል መጠጦች/ቢራ፣ወይን፣ ጠላ፣ የመሳሰለት/ ተጠቅመዋል?	1.አዎ 2.አልተጠቀምኩም	
3.2	እርጉዝ ከሆኑ በኋላ አልኮል ጠጥተው/ተጠቅመው ያውቃሉ?	1.አዎ 2.አላውቅም	
3.3	በእርግዝና ወራትዎ አልኮል ተጠቅመው ካወቁ ብዙ ጊዜ የሚጠጡት አንዴት ነው?	1. በወር አንድ ጊዜ እና ከዚያ ያነሰ 2. በወር ከሁለት እስከ አራት ጊዜ 3. በሳምንት ከሁለት እስከ 3 ጊዜ 4. በሳምንት አራትና ከዚያ በላይ	

ክፍል 4. አሁን ደግሞ በእርግዝና ወራት አልኮል መጠቀም ያለወትን ሁኔታ/ጠባይ ስለመጠየቅ

- | | | |
|--------------------------------------|-----------|-----------|
| 4.1. በፅንሱ ላይ ምንም ጉዳት የለውም | 1. እስማማለሁ | 2. አልስማማም |
| 4.2. መጠቀሙን ሙሉ-ለሙሉ መቆም አለበት | 1. እስማማለሁ | 2. አልስማማም |
| 4.3. ለእርግዝና መጠቀሙ ጥሩ ሊሆን ይችላል | 1. እስማማለሁ | 2. አልስማማም |
| 4.4. አልፎ አልፎ መጠቀም ይቻላል | 1. እስማማለሁ | 2. አልስማማም |
| 4.5. ከተወሰነ የእርግዝና ወራቶች በኋላ መጠቀም ይቻላል | 1. እስማማለሁ | 2. አልስማማም |

4.6. በእርግዝና ወራት አልኮል መጠቀም በፅንሱ ላይ ችግር ያመጣል ብለው ያስባሉ? 1.
አዎ2. አይደለም

ክል 5. የቤተሰብ መሀበራዊ ድጋፍን በተመለከተ

ጥያቄዎች	እጅግ በጣም አልስማማም (1)	በጣም አልስማማም (2)	በትንሹ አልስማማም (3)	ገለልተኛ (4)	በትንሹ እስማማለሁ (5)	በጣም እስማማለሁ (6)	እጅግ በጣም እስማማለሁ (7)
5.1. ቤተሰቦቼ በትክክል ለመርዳት ይሞክራሉ							
5.2. ከቤተሰቦቼ የምፈልገውን ስሜታዊ የሆነ እርዳታ እንክብካቤ አገኛለሁ							
5.3. ከቤተሰቦቼ ጋር ስለችግሮቼ መወያየት እችላለሁ							
5.4. ቤተሰቦቼ ውሳኔዎችን እንድወስኑ ለማገዝ ፍቃደኛ ናቸው							

Declaration

I the undersigned, declare that this thesis is my original work and has never been presented for a degree in this or any other university and all the sources of materials used for the thesis have been fully acknowledged.

Name: Maereg Fekade (Bsc)

Signature: _____

Date: _____

Place Addis Ababa University School of public health

This thesis work has been submitted for the examination with my approval as a university advisor.

Name: (Sefonias Getachew Msc,Phd fellow)

Signature: _____

Date: _____