

2021-09

Alcohol Use and Associated Factors Among Pregnant Women at Debre Tabor Comprehensive Specialized Hospital, Ethiopia.

Alemu, Birhanu

<http://ir.bdu.edu.et/handle/123456789/13481>

Downloaded from DSpace Repository, DSpace Institution's institutional repository



BAHIR DAR UNIVERSITY
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF INTEGRATED EMERGENCY
SURGERY AND OBSTETRICS

ALCOHOL USE AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN AT DEBRE TABOR COMPREHENSIVE SPECIALIZED HOSPITAL, ETHIOPIA.

BY

ALEMU BIRHANU (BSC IN PH)

A THESIS RESULT TO BE SUBMITTED TO BAHIR DAR UNIVERSITY, COLLEGE OF MEDICINE AND HEALTH SCIENCES, DEPARTEMENT OF INTEGRATED EMERGENCY SURGERY AND OBSTETRICS; IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS OF DEGREE OF MASTERS IN INTEGRATED EMERGENCY GENERAL SURGERY, GYNECOLOGY AND OBSTETRICS.

**ADVISORS: Dr. AMSALU W. (MD, OBS & GYN) AND
Mss. ERGOYE M. (MSC, ASS PROF)**

SEPT, 2021

BAHIR DAR, ETHIOPIA

BAHIR DAR UNIVERSITY
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF INTEGRATED EMERGENCY
SURGERY AND OBSTETRICS

NAME OF INVESTIGATOR	Mr. ALEMU BIRHANU PHONE NO. 09-18-44-40-18 e-mail: alemubirhanu888@yahoo.com
NAME OF ADVISORS	Dr. AMSALU WORKU (MD, OBSTETRICIAN & GYNECOLOGIST) PHONE NO. 09-10-00-78-16 e-mail: amsalework4@gmail.com AND Mss. ERGOYE MELESE (ASSISTANT PROFESSOR IN BIOSTATISTICS) PHONE NO. 09-10-02-32-49 e-mail: Muhammedergoye8@gmail.com
FULL TITLE OF THE RESEARCH PROJECT	ALCOHOL USE AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE
DURATION OF PROJECT	MAY 1-30,2021
STUDY AREA	DEBRETABOR COMPREHENSIVE SPECIALIZED HOSPITAL, ETHIOPIA

DECLARATION

This is to certify that the thesis result entitled proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital, Ethiopia, 2021, submitted in the partial fulfillment of the requirements of degree of masters in integrated emergency general surgery, gynecology and obstetrics, Bahir Dar University, is a record of original work carried out by me and has never been submitted to this or any other institution to get any other degree or certificates. The assistance and help I received during the course of this investigation has been duly acknowledged.

Name of investigator

Signature

Date

Alemu Birhanu (BSc in PH)

BAHIR DAR UNIVERSITY
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF INTEGRATED EMERGENCY
SURGERY AND OBSTETRICS

ADVISORS APPROVAL SHEET

This is to certify that the thesis result entitled proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital, Ethiopia, 2021, institutional based cross-sectional study is submitted in partial fulfillment of the requirements for the degree of MSC with specialization in “integrated emergency surgery and obstetrics” to the graduate program of the department of integrated emergency surgery and obstetrics of the College of Medicine and Health Sciences at Bahir Dar University and has been carried out by: Alemu Birhanu Yenehunegn, ID No: BDU/10877/ PGR under our supervision. The student has fulfilled the thesis result requirements and hence here by can submit the thesis result to the department.

Name of Advisors:

Signature

Date

Dr. Amsalu Worku

(MD, Obstetrician &Gynaecologist)

Mss. Ergoye Melese

(Assistant professor in biostatistics)

BAHIR DAR UNIVERSITY
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF INTEGRATED EMERGENCY
SURGERY AND OBSTETRICS

EXAMINERS APPROVAL SHEET

APPROVAL OF THESIS RESULT FOR DEFENCE RESULT

We here by certify that we have examined this thesis result entitled proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital, Ethiopia, 2021 by Alemu Birhanu. We recommend and approve the thesis result a degree of MSC with specialization in “integrated emergency surgery and obstetrics” to the graduate program of the department of integrated emergency surgery and obstetrics.

Board of Examiners

Examiner's name	Signature	Date
-----	-----	-----
-----	-----	-----
-----	-----	-----
Chair person's name		
-----	-----	-----

ACKNOWLEDGEMENT

First of all, I would like to thank almightily “God” the most gracious and the most merciful for His kindness, love and help for me. Next my sincere thanks and appreciation are forwarded to my advisors, Dr. Amsalu Worku (MD, Obstetrician & Gynecologist) and Mss. Ergoye Melese (MSc, Assistant professor in Biostatistics) for their unreserved guidance and keeping me on track with the development of this research proposal. Finally, I would like to acknowledge Bahir Dar University, Amhara Regional State Health Bureau to sponsor me for my education; Debre tabor comprehensive specialized hospital, participants, data collectors, supervisors, all my instructors’ teachers and librarians.

ABSTRACT

Introduction: Alcohol use during pregnancy is a critical public health concern that is linked to several harmful maternal and fetal consequences in world wide. In developing countries especially in Sub-Saharan Africa, the prevalence of alcohol consumption during pregnancy is high. In Ethiopia, about 30% of pregnant women have consumed alcohol during pregnancy. There was no study tried to identify the knowledge of harmful effects of alcohol consumption during pregnancy in the study area. Therefore, this study was aimed to identify possible factors that result in alcohol consumption during pregnancy in the study area.

Objective: The aim of this study was to assess proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital May 1-30, 2021.

Method: Institutional based cross-sectional study was conducted from May 1-30 by using systematic random sampling technique on 612 pregnant women attending antenatal clinic. The data was collected by face-to-face interview through semi structured questionnaires. The filled questionnaires were checked for completeness, edited manually and entered into Epi-data version 3.1 statistical software and then exported to Statistical package for social science version 25 windows for further analysis. A Binary Logistic regression model was used to analyze the data. Variables with P value 0.25 in the Bi-variable analysis were a candidate for multivariable analysis. Variables with P- value<0.05 in multivariable analysis were used as statistically significant associated factors. Adjusted odds ratio with 95% confidence interval was used to determine the degree of association between covariant and the outcome variable.

Results: A total of 612 participants were included in the study with the response rate of 99.02%. The study showed that the prevalence of alcohol use among pregnant women was 26.3%. Factors like living in urban place [AOR=4.08, 95% CI, 2.23, 7.48], having no ANC follow up before survey [AOR=2.69, 95% CI, 1.37, 5.26], unplanned pregnancy [AOR=3.28, 95%CI, 1.88, 5.70], partner alcohol use [AOR=6.88, 95%CI, 3.92, 12.06] and having poor knowledge [AOR=2.26, 95%CI, 1.17, 4.33] were statistically significant associated factors with alcohol use during pregnancy.

Conclusions and Recommendations: In this study, the prevalence of alcohol use during pregnancy was high as compared to the majority of other studies. The finding observed that living in urban place, having no ANC follow up before survey, having unplanned pregnancy, having a partner use alcohol and having poor knowledge were found to be statically significant associated factors with alcohol consumption during pregnancy. Factors associated with alcohol use during pregnancy are essential to reduce alcohol use and its health effect.

Key word: Alcohol, Pregnancy, Associated factors, Debre Tabor, Ethiopia

ACRONYMS AND ABBREVIATIONS

ANC	Antenatal Care
AOR	Adjusted odds ratio
Bsc	Bachelor of Science
CI	Confidence interval
DHS	Demographic health survey
Dr.	Doctor
DTCSH	Debre tabor comprehensive specialized hospital
E.C	Ethiopian calendar
EDHS	Ethiopian demographic health survey
ETB	Ethiopian birr
FASD	Fetal alcohol spectrum disorder
G.C	Gregorian calendar
i.e.	That is
KM	Kilometer
MD	Medical doctor
MPSSf	Multidimensional scale of perceived family social support
MSc	Master of science
PI	Principal Investigator
P-value	Probability value
StatCalc	Statistical calculation
SPSS	Statistical package for social science
T-ACE	Tolerance, annoyed, cut down, eye opener
UK	United Kingdom
US\$	United States dollar
WHO	World health organization

TABLE OF CONTENTS

ACKNOWLEDGEMENT	I
ABSTRACT	II
ACRONYMS AND ABBREVIATIONS	III
LIST OF TABLES	VII
1. INTRODUCTION	1
1.1. BACKGROUND	1
1.2. STATEMENT OF THE PROBLEM.....	2
1.3. SIGNIFICANCE OF THE STUDY	3
2. LITRATURE REVIEW	4
2.1. MAGNITUDE OF ALCOHOL USE DURING PREGNANCY	4
2.2. FACTORS ASSOCIATED WITH ALCOHOL USE DURING PREGNANCY	5
2.2.1. SOCIO DEMOGRAPHIC RELATED FACTORS.....	5
2.2.2 OBSTETRIC FACTORS FOR ALCOHOL USE DURING PREGNANCY	6
2.2.3 ATTITUDE AND KNOWLEDGE OF HARMFUL EFFECTS OF ALCOHOL USE DURING PREGNANCY	6
3. CONCEPTUAL FRAME WORK	8
4. OBJECTIVES	9
4.1. GENERAL OBJECTIVE	9
4.2. SPECIFIC OBJECTIVES.....	9
5. METHDS AND MATERIALS	10
5.1. Study area and study period.....	10
5.3. Source population	10
5.4. Study population.....	10
5.5.2. Exclusion criteria.....	11
5.6. Sample size determination.....	11
5.7. Sampling procedure	13
5.8. Data collection tools and methods.....	13

5.8.1. Data collection tools	13
5.8.2. Data collectors	13
5.8.3. Data collection procedures	13
5.9. Variables	14
5.9.1. Dependent Variable	14
5.9.2. Independent Variables	14
5.10. Operational Definitions	14
5.11. Data Quality Control	15
5.12. Methods of Data Processing and Analysis	15
5.13. Ethical Consideration	16
6. PLAN FOR DISSEMINATION OF RESULTS.....	17
7. RESULTS	18
7.1. Description of socio-demographic characteristics.....	18
7.2. Assessment of obstetric history of respondents.....	20
7.3. Alcohol use during pregnancy.....	21
7.4. Knowledge of the effect of alcohol use on fetus among pregnant women.....	23
7.5 Assessment of attitude towards alcohol consumption during pregnancy.....	24
7.6 Assessment of family social support of respondents.....	25
7.7 Prevalence of alcohol use among pregnant women.....	25
7.8. Factors associated with alcohol use among pregnant women.....	26
8. DISCUSSION.....	28
9. LIMITATIONS OF THE STUDY.....	30
10. CONCLUSIONS AND RECOMMENDATIONS	31
10.1. CONCLUSIONS.....	31
10.2 RECOMMENDATIONS.....	31
11. REFERENCES.....	33
12. PARTICIPANT INFORMATION SHEET AND INFORMED VOLUNTARY CONSENT FORM	36

12.1. Participant Information Sheet and Informed Voluntary Consent Form English Version	36
12.2. Participant Information Sheet and Informed Voluntary Consent Form Amharic version	38
13. ANNEXES	40
13.1 Data Collection Tool	40
13.1.1. Data collection tool (English version)	40
13.1.2. DATA COLLECTION TOOL (AMHARIC VERSION)	46

LIST OF TABLES

Table 1: Summary of sample size determination for research on proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital, Ethiopia, 2021.	12
Table 2: Distribution of socio-demographic characteristics of the respondents among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.....	18
Table 3: Distribution of obstetric history of the respondents among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.....	20
Table 4: Distribution of alcohol use among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.	22
Table 5: Bi-variable and multivariable binary logistic regression analysis showing association between factors and alcohol use among pregnant women visiting antenatal clinic at Debre-tabor comprehensive specialized hospital, Ethiopia, 2021 (n= 612).	27

LIST OF FIGURES

Figure 1: Conceptual frame work for research on proportion of alcohol use and associated factors among pregnant women attending antenatal care in Debre Tabor comprehensive specialized hospital, Ethiopia 2021 adapted after reviewing different literatures [27-29, 35].	8
Figure 2: Magnitude of alcohol use among pregnant women having good knowledge and having poor knowledge about the effect of alcohol use on fetus in Debre-tabor comprehensive specialized hospital (n=612), 2021.	23
Figure 3: Knowledge of health effects of alcohol consumption during pregnancy among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.	24
Figure 4: Attitude towards alcohol consumption during pregnancy among pregnant women in Debre-tabor comprehensive specialized hospital, (n=612), 2021.	24
Figure 5: Family social support among pregnant women in Debre-tabor comprehensive specialized hospital, (n=612), 2021.	25

1. INTRODUCTION

1.1. BACKGROUND

Alcohol consumption can lead to illness and even to death. Worldwide in 2016; Alcohol accounts for 3 million deaths (5.8% of all global deaths) and 5.1% of the global burden of disease and injury[1]. Alcohol consumption during pregnancy may cause a number of health complications for the mother and developing fetus[2].

Alcohol drinking increases the risk of spontaneous abortions, especially in the first trimester of pregnancy and can cause infertility in males and females. Alcohol consumption during pregnancy may seriously affect the developing embryo. With very high repetitive doses fetus developing the fetal alcoholic syndrome and with lower repetitive doses there is a risk of "alcoholic effects" mainly manifested by slight intellectual impairment, growth disturbances and behavioural changes[3].

In sub-Saharan African region alcohol consumption in pregnancy is an increasing problem among pregnant women[4]. In South Africa, research has been conducted on FASD and it has been found that the Western Cape in particular has one of the highest known prevalence rates in the world[5].

In Ethiopia, alcohol consumption and concurrent tobacco smoking and chewing chat is also a major public health concern. Chat consumption increases with age, slightly higher in rural areas than urban areas and commonly consumed in Harare 32% among women [6]. A study done in Bahir-Dar city showed 34% of respondent use alcohol during pregnancy at least once per week[7].

Both manufactured and different locally made and culturally accepted alcoholic drinks are used in Ethiopia with different estimated alcoholic contents (2–4% for “tella” (traditional beer), 7–11% for “tej” (honey wine) and up to 45% for “araq” (strong colorless liquor distilled from grain). These alcoholic beverages are commonly consumed on a daily basis during meals, ceremonies (e.g. Eder, celebration of events), relaxation after work and leisure activities [8-10].

1.2. STATEMENT OF THE PROBLEM

Worldwide, the magnitude of alcohol consumption during pregnancy is estimated to be 10% [11]. In developing countries especially in Sub-Saharan Africa the prevalence of alcohol consumption during pregnancy is high [12]. In Ethiopia, the magnitude of alcohol consumption during pregnancy is estimated to be 30% [13]. Alcohol drinking during pregnancy is one of preventable risk factors for adverse pregnancy and birth outcomes [14]. Alcohol consumption was significantly associated with abortion related maternal deaths with frequent consumers are three times likely to die compared to those who abstained from alcohol during pregnancy [15].

In pregnant woman, alcohol consumption has negative health consequences both for mother and fetus as well as the whole communities. It can cause fetal alcoholic syndrome manifested by prenatal and postnatal growth deficiency, specific craniofacial dysmorphic features, mental retardation, behavioral changes and a variety of major anomalies [3], miscarriage [16], and stillbirth [17]. Researches indicate that even low levels of prenatal alcohol exposure particularly in early pregnancy are not only limited to infancy but also may adversely affect children's intelligence quotient (IQ), mental health, memory and verbal or visual performance [18].

A research, 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 indicates that there is no safe time or safe amount of alcohol to use in pregnancy, and recommends total abstinence for the duration of the pregnancy [19].

In developing 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 during pregnancy [20].

These harmful effects of alcohol consumption do not include all possible problems that a women face during pregnancy rather than it is the problem which brings the mother as well as the fetus to a great risk of morbidity and mortality. Hence, in recognizing the strong link between alcohol consumption during pregnancy and feto-maternal morbidity and mortality, its huge emphasis should be on knowledge of mothers on harmful effects of alcohol consumption and there were no studies conducted in the study area. Therefore, in view of the above background, this study was aimed to assess proportion of alcohol use and associated factors among pregnant women attending antenatal care.

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. There is no study tried to identify the knowledge of harmful effects of alcohol consumption during pregnancy in the study area. The findings of this study were provided information on the current status of consumption of alcohol during pregnancy and give clues about knowledge of harmful effects and possible factors that result in alcohol consumption in the study area. In addition, it would alert Debre Tabor comprehensive specialized hospital to give intervention according to the result. The result of this study also has greater input to program managers for designing programs and proper implementation of their contribution to reduce alcohol related effects and helps to improve wellbeing of children, women and the community as a whole.

2. LITRATURE REVIEW

2.1. MAGNITUDE OF ALCOHOL USE DURING PREGNANCY

A study conducted in Brazil among a total of 1,370 women showed that about 23% of the women consumed alcohol during pregnancy. The result of the study displayed that, consumption mainly occurred in the first trimester (14.8%) and decreased as the pregnancy progressed [21]. A result of cross-sectional survey conducted in Europe showed from the total of 7905 women, almost 16% of women resident in Europe consumed alcohol during pregnancy with large cross-country variations. The highest proportion of alcohol consumption during pregnancy was found in the UK (28.5%), and the lowest in Norway (4.1%) [22].

Population based study conducted by WHO, globally the prevalence of FASD was found to be 7.7 per 1000 population and from a total of 187 courtiers, South Africa have the highest prevalence of FASD at 111.1 per 1000 population [23]. A prospective cohort study conducted in Leeds, UK showed that from the total of 1303 pregnant women aged 18–45 years more than half of pregnant mothers consumed alcohol during pregnancy in the first trimester [24].

Study done in Sub Saharan Africa showed that from the total of 17,908 participants, the prevalence of alcohol consumption among pregnant women varied widely across countries. The result of the study displayed that, the overall prevalence of alcohol consumption during pregnancy was found to be 20.83% with lowest prevalence (4.3%) at Dessie referral hospital, Northeast Ethiopia, whereas the highest prevalence (59.28%) at a tertiary hospital in South Nigeria [12]. Similar study done in sub-Saharan Africa showed that the prevalence of alcohol use during pregnancy ranged from 2.2%-87% [4].

A descriptive cross-sectional survey conducted among 365 pregnant women in Tanzania Showed that up to 15% of the participants consumed alcohol in the current pregnancy [25]. Another cross sectional study conducted in Ghana also showed that nearly half (48%) reported taking alcohol during pregnancy [26]. A Cross sectional study conducted in South Africa showed that from a total of 376 women age 18-49 about 18 % of pregnant women consumed alcohol during pregnancy [27].

Population based study conducted in Ethiopia among a total of 2,341 pregnant women, the study revealed that the prevalence of alcohol use during pregnancy was found to be 30.2% and the result of the study displayed that pregnant women who are in urban area (34%) were slightly prevalent than rural (29.7%) pregnant women residents [8]. Finding from cross sectional study carried out in Addis Ababa among a total of 585 pregnant women use of alcohol during pregnancy was high and it was found to be about (37.1%), among this the majority use alcohol during the second trimester (46.1%) [28].

A Similar Cross sectional study conducted in southern Ethiopia Showed that the prevalence of alcohol uses among pregnant women was found to be 8.1% [29]. Another cross sectional study conducted in Debrebirhan among a total of 380 mothers, showed that the prevalence of risky alcohol use during pregnancy was found to be 16.1% [30].

2.2. FACTORS ASSOCIATED WITH ALCOHOL USE DURING PREGNANCY

2.2.1. SOCIO DEMOGRAPHIC RELATED FACTORS

A result of cross sectional study conducted in Nigeria showed that maternal age 30 years or less and less than tertiary education, were strong predictors of alcohol consumption [31]. Similarly, cross sectional study done on 274 pregnant women in Ghana showed that non-Islamic religion and not being in marital union were strong predictors of alcohol consumption [32]. A cross-sectional study carried out in Tanzania showed that pregnant women with low education status was significantly associated with alcohol consumption [25].

A study conducted in sub-Saharan Africa showed that tobacco use, urban living, and having a male partner who drank alcohol were significantly associated with alcohol consumption during pregnancy[4]. A Cross sectional Study conducted in South Africa showed that from a total of 376 women between the ages of 25–29 years, employed women and in a relationship were more likely use alcohol and other drugs during pregnancy [27].

A cross sectional study carried out in Addis Ababa among a total of 585 pregnant women showed that no formal education was statistically associated with alcohol use during

pregnancy[28]. A community based cross sectional study conducted in Bahir Dar city among the total of 810 pregnant women showed that being married, having alcohol consuming partner, being unemployed were found significantly associated with alcohol consumption [7].

2.2.2 OBSTETRIC FACTORS FOR ALCOHOL USE DURING PREGNANCY

A Prospective cohort study conducted in Australia showed that most women continued to drink alcohol during pregnancy. The result of the study displayed that, Women were more likely to drink alcohol during pregnancy if they had consumed alcohol on prior to pregnancy; binge drank before pregnancy[33]. A similar study done in Korea on women aged 20-43years showed unplanned pregnancy was revealed to be significant risk factors for alcohol consumption in pregnant women [34].

A cross-sectional study conducted in Tanzania Showed that pre pregnancy alcohol use was significantly associated with alcohol consumption during pregnancy [25]. A study among Pregnant Women in Southern Ethiopia Showed, mothers reporting pre pregnancy alcohol use had higher odds of any alcohol use during pregnancy. The result of the study displayed that unplanned pregnancy, abortion history were variables found to have a statistically significant association with alcohol use [29].

2.2.3 ATTITUDE AND KNOWLEDGE OF HARMFUL EFFECTS OF ALCOHOL USE DURING PREGNANCY

A cross-sectional survey done in Australia which investigated women's knowledge and attitudes regarding alcohol use during pregnancy found that 61.5% had heard about effects of alcohol on the fetus and 55.3% had heard of Fetal Alcohol Syndrome. The result of the study displayed that 92.7% agreed alcohol can affect the unborn child, 16.2% did not agree that the disabilities could be lifelong and 79.2% reported having negative feelings towards pregnant women drinking alcohol [35].

In a study of pregnant women in Ghana, it was reported that 60% knew some general effects of alcohol on human health. The result of the study displayed that 82.5% women acknowledge that the effects of alcohol consumption were mostly harmful, 38.6% women felt that a baby born of a woman who drinks alcohol regularly was different from any other baby [32]. A study done in sub-Saharan Africa showed that having Knowledge on harmful effect of alcohol use was found to be a statistically significant association with alcohol consumption during pregnancy[12].

A study conducted in Nigeria showed that lack of awareness of the harmful effect of alcohol on the fetus was associated with alcohol consumption during pregnancy[31]. A cross sectional survey conducted in Russia showed that Attitudes were strongly associated with risky drinking by non-pregnant women across levels of knowledge about FAS and any alcohol use by pregnant women[36]. A similar study done in Nigeria, more than half of the pregnant women (55.7%) were unaware of the harmful effects of alcohol, with only (3.6%) were aware of fetal alcohol syndrome and (4%) of the respondents believed alcohol makes the baby small for delivery [37].

Regarding social support, study conducted in Addis Ababa showed that the lack of social support during pregnancy and the use of alcohol and other substances; Pregnant women with poor social support were 3.16times more likely to use alcohol during pregnancy as compared to those with strong social support [28]. But the other study reports that social support is not predictive of prenatal alcohol use [38].

3. CONCEPTUAL FRAME WORK

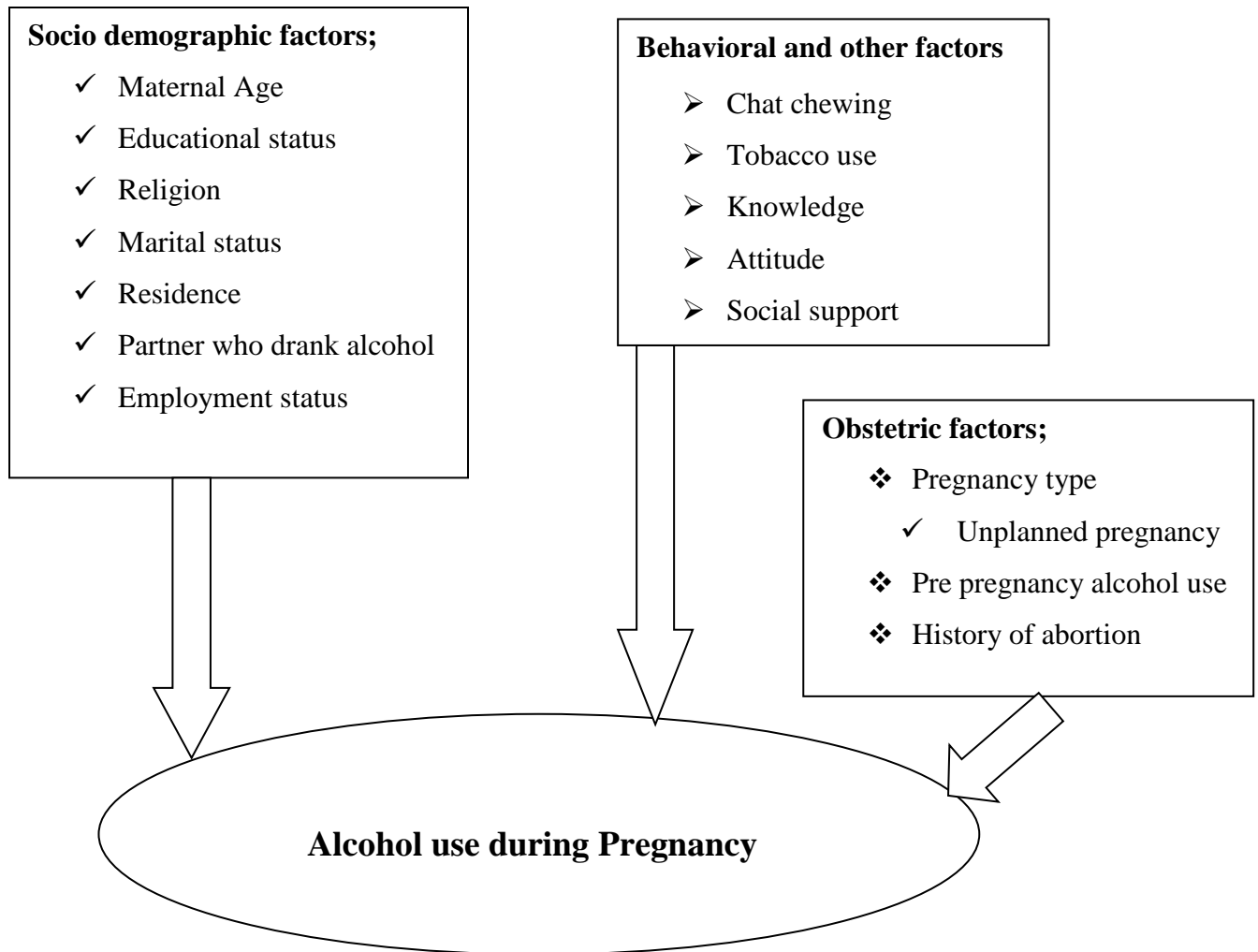


Figure 1:Conceptual frame work for research on proportion of alcohol use and associated factors among pregnant women attending antenatal care in Debre Tabor comprehensive specialized hospital, Ethiopia 2021 adapted after reviewing different literatures [27-29, 35].

4. OBJECTIVES

4.1. GENERAL OBJECTIVE

- ✓ To assess proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital May 1-30, 2021.

4.2. SPECIFIC OBJECTIVES

- ❖ To estimate proportion of alcohol use among pregnant mothers attending antenatal care at Debre Tabor comprehensive specialized hospital.
- ❖ To identify factors associated with alcohol use among pregnant mothers attending antenatal care at Debre Tabor comprehensive specialized hospital.

5. METHODS AND MATERIALS

5.1. Study Area and Study Period

The study was conducted from May 1-30, 2021, at Debre Tabor comprehensive specialized hospital. Debre Tabor hospital is one hospital of Amhara regional state health bureau in Debre Tabor town, the city of South Gondar zone is found in northern part of Amhara which is located 98 km away from Bahir-Dar, the main city of Amhara regional state and 666km away from Addis Ababa. Its climate condition is weynadega.

According to the 2015 population projection estimate, there were 55,596 residents and around half of them were females. There are three health centers, four health posts, five private clinics and one comprehensive specialized hospital in the town. Debre Tabor general hospital was established on 1968E.C and changed to Debre Tabor comprehensive specialized hospital on 2021G.C. It serves approximately 3.5 million people in the catchment area. Currently, it has a total of 439 staffs (among these three gynecologists, five integrated emergency surgical officers, and thirty-six midwives), five major clinical departments, and adult and neonatal intensive care unit.

5.2. Study Design

Institutional based cross-sectional study design was conducted.

5.3. Source Population

All pregnant women attending ANC follow up in Debre Tabor comprehensive specialized hospital.

5.4. Study Population

The study population is pregnant women attending the antenatal care follow up clinic at Debre Tabor comprehensive specialized hospital during study period.

5.5. Inclusion and Exclusion Criteria

5.5. 1.Inclusion criteria

All pregnant women in all trimesters and attending ANC at Debre Tabor comprehensive specialized hospital during the data collection period.

5.5.2. Exclusion criteria

Those pregnant women who are severely ill (but not by alcohol) and unable to respond to the question at the time of interview were excluded from the study.

5.6. Sample Size Determination

The sample size for this study was determined by using a formula for single population proportion and factors. There was a study done on prevalence of alcohol and associated factors during pregnancy in Addis Ababa, with prevalence of alcohol use 37.1% [28]. Therefore, 37.1 % prevalence was taken with 95% confidence interval and 4% margin of error (d), the sample size was calculated as follows:

$$n = \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 P(1 - P)}{d^2}$$

n= number of sample size

Z= Confidence interval of 95% is assumed ($Z_{\frac{\alpha}{2}}=1.96$)

p= population proportion of Alcohol use among pregnant women i.e., 37.1%= 0.371

q=1-p; q=1.0-0.371=0.629

d= level of precision (margin of sample error tolerated) =4%=0.04

= (1.96)²(0.371) (0.629)/ (0.04)² = 560.2

So, n= **618**

The minimum sample size calculated is 561 adding the considered non response rate of 10% the total sample size is 618.

Sample size for associated factors: sample size was determined by using cohort or cross-sectional sample size calculation technique from StatCalc and by considering the following assumptions: AOR women with less than or equal to secondary education, not in marital union and nullipara 1.89, 1.74, 1.94 respectively with 95% confidence interval, 80% power, 1 ratio of unexposed to exposed and percent outcome in unexposed group for women with less than or equal to secondary education, not in marital union and nullipara 19.3% , 31.4% and 20.2% respectively; sample size by formula from StatCalc software become 448 for less than or equal to secondary education, 462 not in marital union and 412 for nullipara. Therefore, the

sample size calculated for the second objective is lower than the first objective and final sample size after adding non-response rate of 10% will be $561+56.1=618$.

Table 1: Summary of sample size determination for research on proportion of alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital, Ethiopia, 2021.

Variables	Assumption	Sample size	References
Dependent variable (alcohol consumption during pregnancy)	CI:95% Prevalence: 37.1%	561	[28]
Maternal education Less than or equal to secondary education	CI: 95% Power: 80% Percent outcome in unexposed: 19.3% AOR: 1.89 Ratio: 1:1	448	[31]
Marital status Not in marital union	CI: 95% Power: 80% Percent outcome in unexposed: 31.4% AOR: 1.74 Ratio 1:1	462	[32]
Parity Nullipara	CI: 95% Power: 80% Percent outcome in unexposed: 12.9% AOR: 1.94 Ratio 1:1	412	[31]

5.7. SAMPLING PROCEDURE

Systematic random sampling technique was used to address individual participants by using a sampling interval ($K=2$). The sampling interval ($K=2$) was determined by dividing the total number of eligible women attending ANC service (pregnant women and without serious medical illness) during the data collection period. Average monthly number of pregnant women who attend antenatal care was taken from monthly follow up report that is 1300. To identify the first participant, we use lottery method between one and K . After addressing the first participant which was 2 by lottery method, K value was added to recruit the next candidate until the proposed sample size is addressed. $K = N/n$ that is, $1300/618=2$ where, K = sampling interval N = average number of pregnant women who attend antenatal clinic, n = number of sample size.

5.8. DATA COLLECTION TOOLS AND METHODS

5.8.1. Data collection tools

Semi structured questioner which is adapted from reviewing different literatures[28, 32] was used to collect the data. The questionnaire contains 42 items including socio demographic characteristics, obstetric variables, knowledge and attitude about harmful effects of alcohol for the fetus. First the tool was prepared in English, translated to Amharic and then translated back to English by expertise to check for consistency.

5.8.2. Data collectors

For administering the interview, four diploma nurses were recruited and two BSc degree nurses were also used to supervise activities.

5.8.3. Data collection procedures

First approval letter was obtained from Bahir Dar University, College of Medicine and Health Sciences, Research and Ethical Review Committee. After getting approval letter data was collected by trained data collectors from those pregnant women attending ANC via face-to-face interview before interviewing the women voluntary informed consent was taken from each woman before the interview; then in the exit area and separate room data was collected. The data collection was hold one month.

5.9. VARIABLES

5.9.1. Dependent Variable

Alcohol use during current pregnancy (yes/no)

5.9.2. Independent Variables

- **Socio demographic variables**
 - ✓ Age (in year), Religion, Ethnicity, Marital status, educational status
 - ✓ Occupation, Average monthly income, Residence
- **Obstetric variables;**
 - ❖ Gestation in weeks, ANC follow up, gravidity, parity, planned pregnancy, history of abortion
- **Behavioral and other factors**
 - ✓ Chat chewing, Tobacco use during pregnancy
 - ✓ Knowledge towards the effect of alcohol uses on fetus; good knowledge/ poor knowledge
 - ✓ Attitude towards the effect of alcohol use on fetus; positive attitude/ negative attitude
 - ✓ Family social support; Has good family social support/has poor family social support

5.10. Operational Definitions

Alcohol: a drink containing ethanol both homes brewed as well as fabricated alcoholic beverages.

Traditional alcohol: home brewed alcohol in Ethiopia that include (e.g. Tela, Teje, Araqe)

Alcohol use- any amount of alcohol use during period of pregnancy (Respondents who answered “Yes” to the question “Have you ever consumed alcohol during your current pregnancy?” had alcohol use in pregnancy).

Chat use- any amount of chat uses during pregnancy period.

Cigarette smoking- smoking history of cigarette during pregnancy period even for once

Has good knowledge about the effect of alcohol use on fetus – if respondents answered greater or equal to the mean for questions that describe about the effect of alcohol use on fetus[32].

Has poor knowledge about the effect of alcohol use on fetus – if respondents answered less than the mean for questions that describe about the effect of alcohol use on fetus.

Positive attitude about the effect of alcohol use on fetus – if respondent's answered correctly for six (all) questions that describe about the effect of alcohol use on fetus[39].

Negative attitude 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.

Having poor family social support- if respondents scored less than mean from Multidimensional Scale of Perceived family Social Support (MSPSSf) scale [28, 38].

Having good family social support- if respondents scored greater than or equal to mean from Multidimensional Scale of Perceived family Social Support (MSPSSf) scale.

5.11. Data Quality Control

Training: To assure the data quality training was given both for the data collectors and supervisors for one day by the principal investigator on the objective, relevance of the study, confidentiality of information, respondent's right, informed consent and techniques of interview.

Pretest: Pretest was done in Felege-Hiwot comprehensive specialized hospital by taking 10% of the total sample size on 62 pregnant women before the actual data collection period to assess instrument simplicity, flow, consistency and to check the validity and reliability of the instrument. Modifications was done on the questioner that describes about attitude.

Supervision: Supervisors and the principal investigator were done close supervision to reviewing and to ensure completeness and consistency of the filled questionnaires.

Data entry: before data entry each questionnaire was checked for completeness and unlikely responses. Data was edited, coded and entered in to Epi data. Entry errors were checked and corrected by going back to the questionnaires.

5.12. Methods of Data Processing and Analysis

The collected data was checked visually for its completeness and the response was coded and entered into the computer using Epi data version 3.1. Then data was exported to windows of Statistical Package for Social Science (SPSS) version 25 for data analysis. During the process of

analysis, descriptive statistics like frequencies mean and percentage was used to provide an overall and coherent presentation and description of the results.

Bivariable binary logistic regression was done to see the significant relation of each independent variable with dependent variable. Variables with 95% confidence interval and P value <0.25 during the bi variable logistic regression analysis were entered to multivariable analysis to see the relative effect of confounding variables and interaction of variables.

Odds ratio with 95% CI were performed on variables on the multi variable analysis to determine the strength of association. P-value less than or equal to 0.05 was taken as cut of value to be declared as significant. Model fitness was checked by Hosmer and Lemeshow test.

5.13. Ethical Consideration

Ethical clearance was obtained from Bahir Dar University, College Medicine and Health Sciences, Research and Ethical Review Committee. Before the beginning of data collection permission letter was provided to DTCSH Administration Office. Participation was voluntary and information was collected anonymously after obtaining voluntary informed consent from each respondent by assuring confidentiality throughout data collection period. Participants were told the objective of the study and their right to refuse or answer the questionnaires and were given the right to stop or withdraw at any time of data collection. Confidentiality was maintained by omitting their name and personal identification.

6. DISSEMINATION OF RESULTS

The primary objective of this study is for partial fulfillment in the requirements to degree of Master in integrated emergency surgery and obstetrics. The result was submitted to Bahir Dar University, College of Medicine and Health Sciences. It was also submitted to Debre Tabor comprehensive specialized hospital, antenatal clinic and Debre-tabor town health office. Further effort will be made to present it on workshop and conference, and to publish it on different journals.

7. RESULTS

7.1. Description of socio-demographic characteristics

The response rate of this research was 99.02%. Out of 612 pregnant women, 97.2% (595) were married women. Two hundred fourteen (35%) were college and above and 97 (15.8%) were non-educated. The mean age of respondents was $28.18 \pm SD5.112$ years (ranging from 18-42). Regarding to age distribution of pregnant women were highly distributed in the category of (25-29) years old were 262(42.8%), and the least age range was ≤ 20 years old which was 32 (5.8%).

Among the total respondents in ethnicity 608 (99.3%) were Amhara and 4(0.7%) were Tigre. Of the participants in religious background 561(91.7%) were followers of orthodox, followed by 47(7.7%) Islam, and 7(0.7%) were Protestant. The majorities of pregnant women 254(41.5%) were house wife which was followed by some form of employment 173(28.3%). Five hundred twenty-seven (86.1%) were found in urban area and 85(13.8%) in rural. Majority of pregnant women 487(79.6%) has an average monthly income ≥ 2000 ETB.

Table 2: Distribution of socio-demographic characteristics of the respondents among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.

Variables	Frequency	Percent (%)
Age		
≤ 20	32	5.2
21-24	124	20.3
25-29	262	42.8
≥ 30	194	31.7
Mean (SD)	28.18 ± 5.112	
Religion		
Orthodox	561	91.7

Muslim	47	7.7
Protestant	4	0.7
Marital status		
Single	11	1.8
Married	595	97.2
Divorced	5	0.8
Widowed	1	0.2
Ethnicity		
Amhara	608	99.3
Tigre	4	0.7
Educational status		
Can't read and write	97	15.8
Primary education	132	21.6
Secondary education	169	27.6
College and above	214	35.0
Occupation		
House wife	254	41.5
Merchant (own business)	117	19.1
Farming	65	10.6
Employed	173	28.3
Other	3	0.5
Residence		
Rural	85	13.9
Urban	527	86.1

Monthly family income in ETB		
501-999 birr	6	1.0
1000-1999	119	19.4
>=2000	487	79.6

7.2. Assessment of obstetric history of respondents

As illustrated in table 3 below, the majority of the pregnant women 283(46.2%) were in the second tri-minister (between 3-6 months) followed by 236(38.6%) of pregnant women which were found in third tri-minister (>6 months). Five hundred thirteen (83.8%) pregnant women have ANC follow up and among these 332(54.3%) were advised towards alcohol consumption during pregnancy. Many of pregnant women haven't alive children 292(47.7%), and 401(65.5%) of the pregnant women had planned for current pregnancy. Five hundred forty-two (88.6%) of pregnant women have no history of abortion.

Table 3: Distribution of obstetric history of the respondents among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.

Variables	Frequency	Percent (%)
Gestational age of participant		
<3 months	93	15.2
3-6 months	283	46.2
>6months	236	38.6
ANC follow up		
Yes	513	83.8
No	99	16.2
Advice about alcohol during ANC visit		
Yes	332	54.2
No	181	29.6
Total	513	

Number of pregnancy(gravidity)		
First time	288	47.1
Second time	166	27.1
>=Three times	158	25.8
Number of alive children		
No child	292	47.7
One	176	28.8
Two	75	12.3
Three and above	69	11.3
Plan of current pregnancy		
Planned	401	65.5
Unplanned	211	34.5
History of abortion		
Yes	70	11.4
No	542	88.6

7.3. Alcohol use during pregnancy

As illustrated in table 4 below, 161(26.3%) were drinking alcohol during pregnancy predominately Tella (traditional alcohol beverage) 122 (19.9%), 103(16.8%) were drinking in the first three months of pregnancy and many of them 74 (12.1%) were used alcohol 2-4 times per month while 3 (0.5%) of pregnant women use four and above times per week. Among those who consumed alcohol during pregnancy were due to social reason 71(11.6%) followed by considering increases fetal movement 51(8.3%). And 379(61.9%) had used alcohol before pregnancy. Only twelve (2.0%) of the pregnant women were using chat during pregnancy period. More than half 319 (52.1) of their partners were used alcohol. All of pregnant women were not smoke during pregnancy.

Table 4: Distribution of alcohol use among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.

Variables	Frequency	Percent (%)
Alcohol use before pregnancy		
Yes	379	61.9
No	233	38.1
Alcohol use during pregnancy		
Yes	161	26.3
No	451	73.7
Alcohol use during the first three months of pregnancy		
Yes	103	16.8
No	58	9.5
Frequency of alcohol use during pregnancy		
<= once a month	58	9.5
2-4 times per month	74	12.1
2-3 times per week	26	4.2
4 and above per week	3	0.5
Type of alcohol use		
Tella	122	19.9
Areqe	16	2.6
Beer	14	2.3
Wine	9	1.5
Reason to use alcohol during pregnancy		
For relaxation	21	3.4
For social reason	71	11.6
Peer pressure	9	1.5
To get relief from stress	9	1.5

To increase fetal movement	51	8.3
Partner use alcohol		
Yes	319	52.1
No	293	47.9
Chat use during pregnancy		
Yes	12	2.0
No	600	98.0

7.4. Knowledge of the effect of alcohol use on fetus among pregnant women

Four hundred eighty (78.4%) pregnant women have good knowledge about the effect of alcohol on fetus and from these 77 (16.04%) of them use alcohol during pregnancy whereas from the total pregnant women 132(21.6%) were having poor knowledge about the effect of alcohol on fetus and from these 84(63.6%) were use alcohol. Among the total of pregnant women 249(40.7%) were considered a baby born from a mother who drinks regularly alcohol during pregnancy different from others. Among pregnant women 332(54.2%) were know the effects of alcohol use on fetus during pregnancy from health workers followed by media 92(15.0%). And only 26(4.2%) pregnant women were noticed effects in their family or communities.

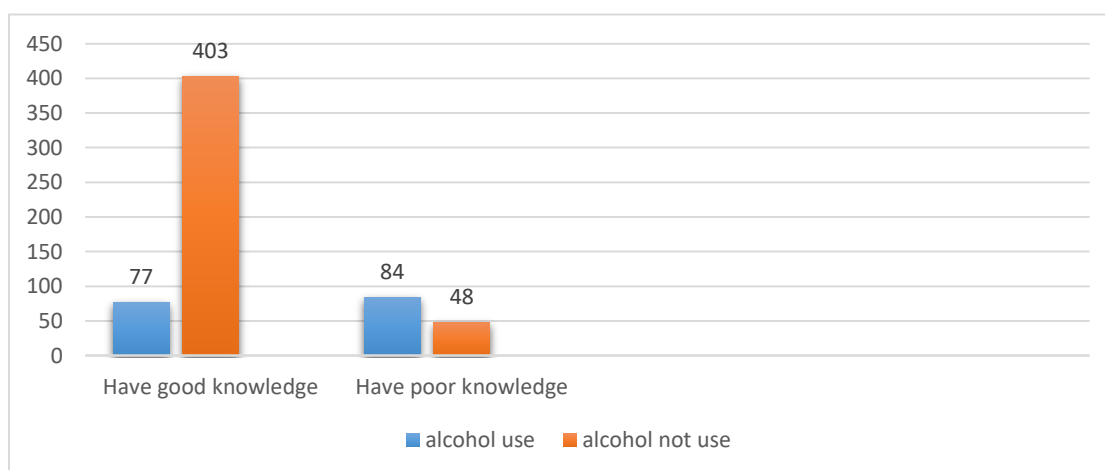


Figure 2: Magnitude of alcohol use among pregnant women having good knowledge and having poor knowledge about the effect of alcohol use on fetus in Debre-tabor comprehensive specialized hospital (n=612), 2021.

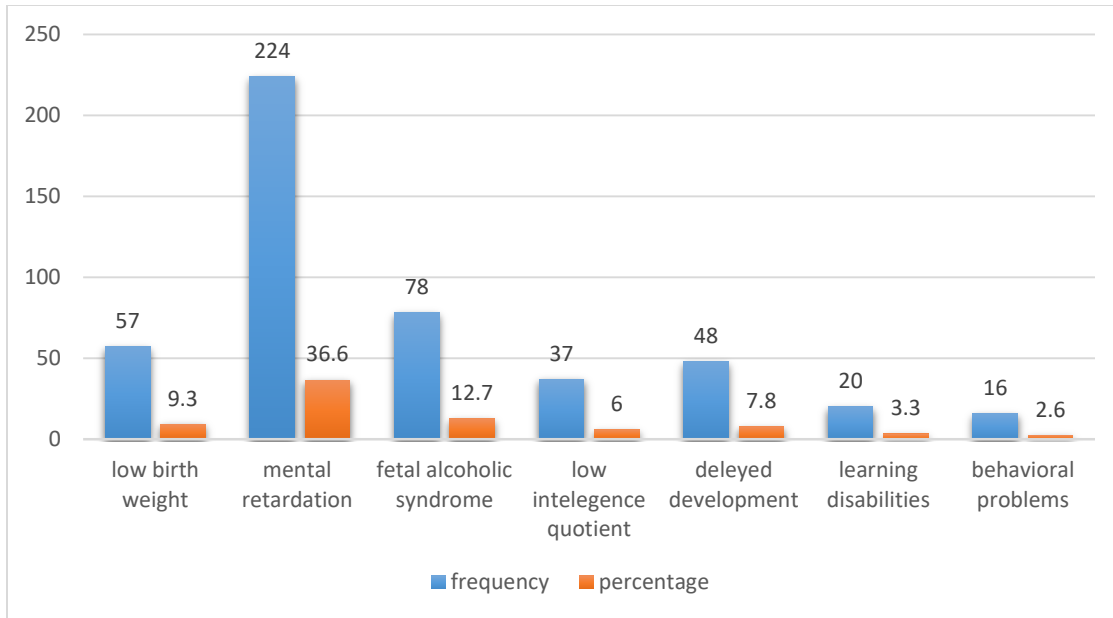


Figure 3: Knowledge of health effects of alcohol consumption during pregnancy among pregnant women in Debre-tabor comprehensive specialized hospital (n=612), 2021.

7.5 Assessment of attitude towards alcohol consumption during pregnancy

Among the total of pregnant women 509(83.2%) have positive attitude by responding all questions correctly that describes about attitude towards alcohol consumption during pregnancy whereas 103(16.8%) have negative attitude.

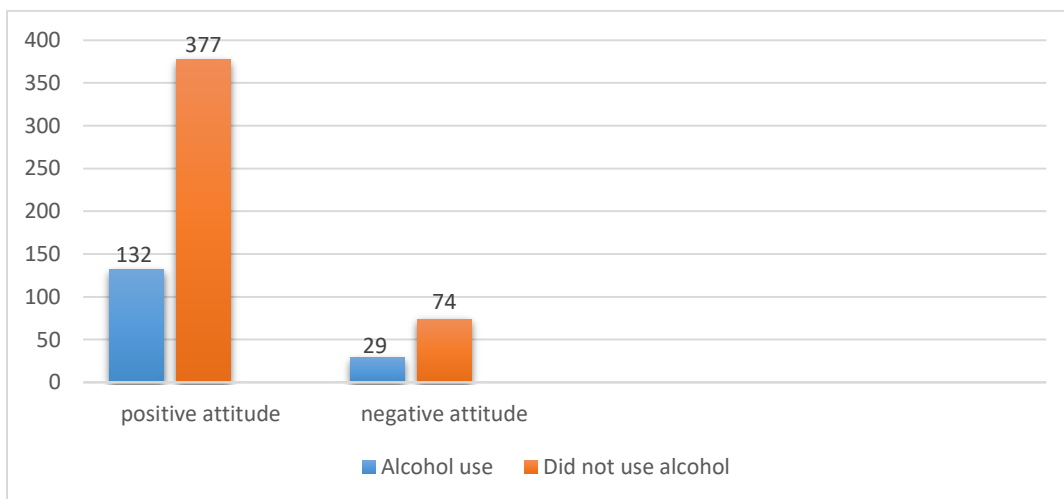


Figure 4: Attitude towards alcohol consumption during pregnancy among pregnant women in Debre-tabor comprehensive specialized hospital, (n=612), 2021.

7.6 Assessment of family social support of respondents

Among the total of respondents 575(94.0%) of pregnant women have good family social support from this 124(21.5%) were used alcohol during pregnancy whereas only 37(6.0%) pregnant women have poor family social support and all them were consumed alcohol during pregnancy.

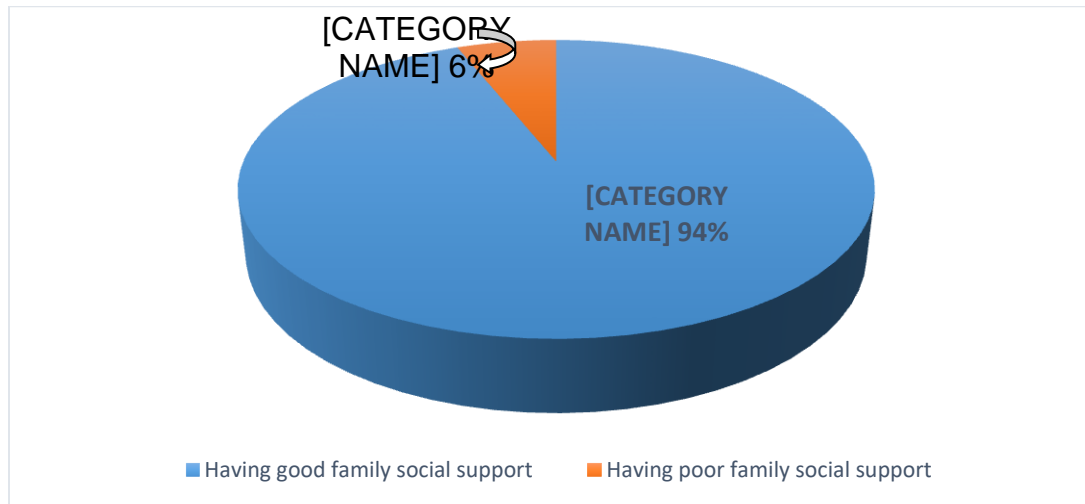


Figure 5: Family social support among pregnant women in Debre-tabor comprehensive specialized hospital, (n=612), 2021.

7.7 Prevalence of alcohol use among pregnant women

The overall prevalence of alcohol use among pregnant women in Debre-tabor comprehensive specialized hospital was found to be 26.3% with (95 % CI: 23- 29.6%).

7.8. Factors associated with alcohol use among pregnant women

In bi-variable binary logistic analysis variables; age between 21-24 and 25-29, living in urban place, no ANC follow up, unplanned pregnancy, have history abortion, partner alcohol use, and have poor knowledge were found to have p-value less than 0.25. Those variables fulfilled minimum requirement for further multivariate binary logistic regression. From multivariable binary logistic regression only variables living in urban place, no ANC follow up before data collection, unplanned pregnancy, partner alcohol use, and have poor knowledge were statistically associated with alcohol use during pregnancy at p-value less than 0.05.

The odds of having alcohol use during pregnancy among respondents with living in urban place was 4 times higher as compared to those living in rural area [AOR = 4.08, 95% CI, 2.23, 7.48]. Women with no ANC follow up before survey were 2.69 times more likely to drink alcohol during pregnancy than those who have ANC follow up [AOR = 2.69, 95% CI, 1.37, 5.26].

The odds of having alcohol use during pregnancy among respondents with unplanned pregnancy was 3 times higher as compared to those who have planned pregnancy [AOR= 3.28, 95%CI, 1.88, 5.70]. Women with whose partner alcohol use were 6.8 times more likely to drink alcohol during pregnancy than women with a partner not users of alcohol [AOR = 6.88, 95%CI, 3.92, 12.06]. Pregnant women with poor knowledge were 2.26 times more likely to use alcohol during pregnancy as compared to those who have good knowledge [AOR = 2.26, 95%CI, 1.17, 4.33].

Table 5: Bi-variable and Multivariable binary logistic regression analysis showing association between factors and alcohol use among pregnant women visiting antenatal clinic at Debre-tabor comprehensive specialized hospital, Ethiopia, 2021 (n= 612).

Variables	Alcohol use during pregnancy		Crude OR (95% CI)	Adjusted OR (95% CI)	p- value
	Yes	No			
Age					
<=20	12	20	1.09(0.50-2.37)	0.95(0.37-2.44)	0.925
21-24	26	98	2.48(1.47-4.17)	1.41(0.68-2.93)	0.344
25-29	46	216	3.09(2.01-4.75)	1.08(0.60-1.94)	0.785
>=30	77	117	1.00	1.00	
Residence					
Rural	60	25	1.00	1.00	
Urban	101	426	10.12(6.05-16.93)	4.08(2.23-7.48) *	<0.001
History of ANC follow up					
Yes	98	415	1.00	1.00	
No	63	36	7.41(4.65-11.79)	2.69(1.37-5.26) *	0.004
Pregnancy plan					
Planned	46	315	1.00	1.00	
Unplanned	115	96	9.24(6.13-13.92)	3.28(1.88-5.70) *	<0.001
History of abortion					
Yes	43	27	5.72(3.39-9.65)	1.91(0.95-3.83)	0.067
No	118	424	1.00	1.00	
Partner alcohol use					
Yes	137	182	8.43(5.25-13.53)	6.88(3.92-12.06) *	<0.001
No	24	269	1.00	1.00	
Knowledge					
Have good knowledge	77	403	1.00	1.00	
Have poor knowledge	84	48	9.15(5.95-14.08)	2.26(1.17-4.33) *	0.014

NB: * refers association, OR=Odds ratio, CI=Confidence Interval

8. DISCUSSION

This study assessed the prevalence of maternal alcohol consumption during pregnancy, as well as predictors in Debre tabor comprehensive specialized hospital. The overall prevalence of alcohol use of pregnant women was 26.3% with (95 % CI: 23- 29.6%) that met use of alcohol at least once during the current pregnancy period. The finding of the current study was in line with studies carried out in Brazil 23% [21], and UK 28.5% [22]. However, the current study was less than the study was done in Ghana 48% [26], in Addis Abeba 37.1% [28] and Bahir Dar 34% [7]. The possible reason for this difference might be time of study, population variation and inclusion of only pregnant women attending ANC clinic might yield a lower prevalence of alcohol use as women attending ANC can have the opportunity of counseling service, and may gain better knowledge and attitude towards the health of the fetus and themselves.

On the other hand, the finding this study was higher than studies done in Tanzania 15% [25], southern Ethiopia 8.9% [29] and Debrebirhan 16.1% [30]. This variation might be due to time of study and another possible reason for this discrepancy might be due to socio-cultural difference, type of alcohol and knowledge about the effect of alcohol on fetus.

Multivariable logistic regression revealed that living in urban place, no ANC follow up, unplanned pregnancy, partner alcohol use, and have poor knowledge had a statistically significant association with alcohol use during pregnancy. In this study, living in urban place was associated with alcohol use during pregnancy which was in line with the result found in sub-Saharan Africa [4] and Ethiopia [8]. It could be explained by; alcohol can be easily available and they might have more economical source than rural area. This study revealed that no ANC follow up and having unplanned pregnancy reported more alcohol use during pregnancy which is in line with finding of other literatures[29], [30]. The possible reason could be having ANC follow up before survey women can have the opportunity of counseling service towards alcohol consumption during pregnancy.

Women having alcohol consuming partner were significantly associated and more likely to drink alcohol during pregnancy than women with a partner not use alcohol. This study is in line with finding of other literatures [4], [7]. The reason might be due to pregnant women can be easily invited by their relatives to drink alcohol during pregnancy. More over, in this study pregnant women having poor knowledge about the effect of alcohol consumption during pregnancy on fetus experienced higher levels of alcohol use than pregnant women having good knowledge is also supported by previous researches[12],[32],[35]. This might be because of pregnant women did not know about the effect of alcohol on fetus and they might consider as to increase fetal movement.

9. LIMITATIONS OF THE STUDY

- ✓ Since the study design was a cross sectional, it would be very difficult to draw conclusions about the relationship/ does not permit causal interpretations.
- ✓ Participants were recruited from ANC clinics which might not be representative for women who do not attend ANC.
- ✓ Recalling problem (recalling bias) of some behaviors or face to social desirability bias which is the tendency of the participants to answer the questions according to socially accepted manner and they may under report their alcohol consumption.

10. CONCLUSION AND RECOMMENDATIONS

10.1. CONCLUSION

According to world health organization recommendation, it is expected to no pregnant women will drink alcohol in any amount. In this study, the prevalence of alcohol use during pregnancy was high as compared to the majority of other studies. The finding observed that living in urban place, having no ANC follow up before data collection, having unplanned pregnancy, having a partner use alcohol and having poor knowledge were found to be statically significant associated factors with alcohol consumption during pregnancy. There fore, interventional studies are needed to come up with an effective strategy to reduce the prevalence of alcohol use during pregnancy.

10.2 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 knowledge and awareness creation about alcohol use during pregnancy.
- ✓ Develop and disseminate educational materials and advertisement on dangers of alcohol use during pregnancy.
- ✓ Strengthening family planning policy and services to reduce unplanned pregnancies.

For Amhara regional health office

Scheduled and ongoing knowledge and awareness creation about the effect of alcohol on fetus during pregnancy

- ✓ family education program should be strengthened that helps to empowering pregnant women with knowledge and not to encouraged and invited by their partner.
- ✓ Decreasing unplanned pregnancy should be strengthening in health facility as well as at community.

For Debre Tabor comprehensive specialized hospital and health workers

- ✓ During ANC follow up every pregnant woman should be advised not to use alcohol during pregnancy.
- ✓ Moreover, rather than exclusively targeting antenatal care, alcohol use screenings for diagnosis of problems early 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.

11. REFERENCES

1. Organization, W.H., Global status report on alcohol and health 2018. 2019: World Health Organization.
2. Popova, S., et al., Prevalence of alcohol consumption during pregnancy and Fetal Alcohol Spectrum Disorders among the general and Aboriginal populations in Canada and the United States. *European journal of medical genetics*, 2017. **60**(1): p. 32-48.
3. Ornoy, A. and Z. Ergaz, Alcohol abuse in pregnant women: effects on the fetus and newborn, mode of action and maternal treatment. *International journal of environmental research and public health*, 2010. **7**(2): p. 364-379.
4. Culley, C.L., et al., Alcohol exposure among pregnant women in Sub-Saharan Africa: a systematic review. *Journal of Population Therapeutics and Clinical Pharmacology*, 2013. **20**(3).
5. Petersen Williams, P., et al., Alcohol and other drug use during pregnancy among women attending midwife obstetric units in the Cape Metropole, South Africa. *Advances in preventive medicine*, 2014. **2014**.
6. Tessema, Z.T. and T.A. Zeleke, Prevalence and predictors of alcohol use among adult males in Ethiopia: multilevel analysis of Ethiopian Demographic and Health Survey 2016. *Tropical medicine and health*, 2020. **48**(1): p. 1-9.
7. Anteab, K., B. Demtsu, and M. Megra, Assessment of prevalence and associated factors of alcohol use during pregnancy among the dwellers of Bahir-Dar City, Northwest Ethiopia, 2014. 2014.
8. Fekadu, A., A. Alem, and C. Hanlon, Alcohol and drug abuse in Ethiopia: past, present and future. *Afr J Drug Alcohol Stud*, 2007. **6**(1): p. 40-53.
9. Soboka, M., et al., Alcohol use disorders and associated factors among people living with HIV who are attending services in south west Ethiopia. *BMC research notes*, 2014. **7**(1): p. 1-9.
10. Lee, M., M. Regu, and S. Seleshe, Uniqueness of Ethiopian traditional alcoholic beverage of plant origin, tella. *Journal of Ethnic Foods*, 2015. **2**(3): p. 110-114.
11. Popova, S., et al., Estimation of national, regional, and global prevalence of alcohol use during pregnancy and fetal alcohol syndrome: a systematic review and meta-analysis. *The Lancet Global Health*, 2017. **5**(3): p. e290-e299.
12. Addila, A.E., et al., Alcohol consumption and its associated factors among pregnant women in Sub-Saharan Africa: a systematic review and meta-analysis' as given in the submission system. *Substance abuse treatment, prevention, and policy*, 2020. **15**: p. 1-14.
13. Addis, N., et al., Alcohol use and its associated factors during pregnancy in Ethiopia: a population-based survey. 2020.
14. Csa, I., Central statistical agency (CSA)[Ethiopia] and ICF. Ethiopia demographic and health survey, Addis Ababa, Ethiopia and Calverton, Maryland, USA, 2016.
15. Asamoah, B.O. and A. Agardh, Alcohol consumption in relation to maternal deaths from induced-abortions in Ghana. *Reproductive health*, 2012. **9**(1): p. 1-9.
16. Henriksen, T.B., et al., Alcohol consumption at the time of conception and spontaneous abortion. *American journal of epidemiology*, 2004. **160**(7): p. 661-667.
17. Kesmodel, U., et al., Moderate alcohol intake during pregnancy and the risk of stillbirth and death in the first year of life. *American journal of epidemiology*, 2002. **155**(4): p. 305-312.

18. Polanska, K., J. Jurewicz, and W. Hanke, Smoking and alcohol drinking during pregnancy as the risk factors for poor child neurodevelopment-A review of epidemiological studies. *International journal of occupational medicine and environmental health*, 2015. **28**(3): p. 419.
19. Kampman, K. and M. Jarvis, American Society of Addiction Medicine (ASAM) national practice guideline for the use of medications in the treatment of addiction involving opioid use. *Journal of addiction medicine*, 2015. **9**(5): p. 358.
20. Kingsland, M., et al., A practice change intervention to improve antenatal care addressing alcohol consumption by women during pregnancy: research protocol for a randomised stepped-wedge cluster trial. 2018.
21. Sbrana, M., et al., Alcohol consumption during pregnancy and perinatal results: a cohort study. *Sao Paulo Medical Journal*, 2016. **134**(2): p. 146-152.
22. Mårdby, A.-C., et al., Consumption of alcohol during pregnancy—A multinational European study. *Women and Birth*, 2017. **30**(4): p. e207-e213.
23. Lange, S., et al., Global prevalence of fetal alcohol spectrum disorder among children and youth: a systematic review and meta-analysis. *JAMA pediatrics*, 2017. **171**(10): p. 948-956.
24. Nykjaer, C., et al., Maternal alcohol intake prior to and during pregnancy and risk of adverse birth outcomes: evidence from a British cohort. *J Epidemiol Community Health*, 2014. **68**(6): p. 542-549.
25. Mpelo, M., et al., Prevalence and factors influencing alcohol use in pregnancy among women attending antenatal care in Dodoma region, Tanzania: a cross-sectional study. *Journal of pregnancy*, 2018. **2018**.
26. Lekettey, J.D.P., et al., Alcohol consumption among pregnant women in James town community, Accra, Ghana. *Reproductive health*, 2017. **14**(1): p. 1-8.
27. Onah, M.N., et al., Predictors of alcohol and other drug use among pregnant women in a peri-urban South African setting. *International Journal of Mental Health Systems*, 2016. **10**(1): p. 1-10.
28. Tesfaye, G., et al., The prevalence and associated factors of alcohol use among pregnant women attending antenatal care at public hospitals Addis Ababa, Ethiopia, 2019. *BMC psychiatry*, 2020. **20**(1): p. 1-10.
29. Mekuriaw, B., et al., Alcohol use and associated factors among women attending antenatal care in Southern Ethiopia: a facility based cross sectional study. *BMC research notes*, 2019. **12**(1): p. 1-7.
30. Wubetu, A.D., S. Habte, and K. Dagne, Prevalence of risky alcohol use behavior and associated factors in pregnant antenatal care attendees in Debre Berhan, Ethiopia, 2018. *BMC psychiatry*, 2019. **19**(1): p. 1-9.
31. Onwuka, C.I., et al., Prevalence and predictors of alcohol consumption during pregnancy in South-Eastern Nigeria. *Journal of clinical and diagnostic research: JCDR*, 2016. **10**(9): p. QC10.
32. Adeyiga, G., E.A. Udofia, and A.E. Yawson, Factors associated with alcohol consumption: a survey of women childbearing at a national referral hospital in Accra, Ghana. *African Journal of Reproductive Health*, 2014. **18**(2): p. 152-165.
33. Anderson, A.E., et al., Predictors of antenatal alcohol use among Australian women: a prospective cohort study. *BJOG: An International Journal of Obstetrics & Gynaecology*, 2013. **120**(11): p. 1366-1374.

34. Lee, S.H., et al., Alcohol use during pregnancy and related risk factors in Korea. *Psychiatry Investigation*, 2010. **7**(2): p. 86.
35. Peadon, E., et al., Women's knowledge and attitudes regarding alcohol consumption in pregnancy: a national survey. *BMC public Health*, 2010. **10**(1): p. 1-8.
36. Balachova, T., et al., Do attitudes and knowledge predict at-risk drinking among Russian women? *The American journal of drug and alcohol abuse*, 2016. **42**(3): p. 306-315.
37. Usifoh, S.F., et al., Alcohol consumption: Prevalence, its predictors and knowledge of its harmful effects among pregnant women in Niger Delta, Nigeria.
38. McNAMARA, T.K., et al., Social support and prenatal alcohol use. *Journal of Women's Health*, 2006. **15**(1): p. 70-76.
39. Le Roux, C., Pregnant woman's perceptions and knowledge regarding alcohol use during pregnancy. 2013.

12. PARTICIPANT INFORMATION SHEET AND INFORMED VOLUNTARY CONSENT FORM

12.1. Participant Information Sheet and Informed Voluntary Consent Form

English Version

My name is _____. I am working with Mr. Alemu Birhanu, who is doing a research as partial fulfillment for the requirement of Master Degree of integrated emergency surgery and obstetrics at Bahir Dar University, College of Medicine and Health Sciences. I kindly requested you to lend me your attention to explain you about the study and being selected as the study participant.

1. Title of the Research Project:

Alcohol use and associated factors among pregnant women attending antenatal care at Debre Tabor comprehensive specialized hospital May 1-30, 2021.

2. Purpose of the Research Project:

The purpose of this study is to assess proportion of alcohol consumption during pregnancy and associated factors among pregnant women attending antenatal care. Therefore, the identification of the magnitude and the possible factors that determine the alcohol consumption during pregnancy will help to suggest interventions to be designed in order to reduce the harmful effects of alcohol on fetus.

3. Procedure and duration

I will be interviewing you using a questionnaire to provide me with pertinent data that is help full for the study. There are 42 questions to answer where I will fill the questionnaire by interviewing you. The interview will take about 30 minutes, so I kindly request you to spare me this time for the interview.

4. Risks and benefits

The risk of being participating in this study is very minimal, but only taking few minutes from your time. There would not be any direct payment for participating in this study, but the findings from this research may revel important information for the local health planner.

5. Confidentiality:

The information collected from this research project will be kept confidential and information about you that will be collected by this study will be stored in a file, without your name. There is

no information that identifies you in particular. The finding of the study will be general for the study community and will not reflect anything particular of individual person and housing.

6. Right

Participation for this study is fully voluntary. You have the right to declare to participate or not in the study. If you decide to participate, you have the right to withdraw from the study at any time and this will not label you for any loss of benefits which you otherwise are entitled. You do not have to answer any question that you do not want to answer.

7. Contact address:

For any confusion concerning the study you can contact us by the following address.

Principal investigator: Mr. Alemu Birhanu

Email: alemubirhanu888@yahoo.com

Phone no: 0918444018

Bahir Dar University

8. Declaration of informed voluntary consent

I have read/ was read to the participant information sheet. I have clearly understood the purpose of the research, the procedures, the risks and benefits, issues of confidentiality, the rights of participating and the contact address for any queries. I have been given the opportunity to ask questions for things that may have been unclear. I was informed that I have the right to withdraw from the study at any time or not to answer any question that I do not want. Therefore; I declare my voluntary consent to participate in this study.

Name and signature of data collector: _____

Thank you for your cooperation!

12.2. Participant Information Sheet and Informed Voluntary Consent Form

Amharic version

የጥናቱ ተሳታፊዎች መረጃ መስጫና ፈቃደኝነት መጠየቂያ ቅፅ (በአማርኛ)

የተሳታፊዎች መረጃ:

እንደምን አሉ! ስሜ-----እባላለሁ::

በባህርዳር ዩኒቨርሲቲ የሁለተኛ ዲግሪውን የሚያጠናው አቶ አለሙ ብርሃኑ በሚያደርገው ምርምር በመረጃ ሰብሳቢነት እሰራለሁ::

የጥናቱ ርዕስ: በደብረ-ታቦር አጠቃላይ ስፔሻላይዘድ ሆስፒታል ነፍሰ-ጡር እናቶች አልኮል መጠጥ እና ለዚህም የሚረዱ ተዛማጅ ሁኔታዎችን መለየት ይሰኛል::

የጥናቱ አላማ: በደብረ-ታቦር አጠቃላይ ስፔሻላይዘድ ሆስፒታል ከነፍሰ-ጡር እናቶች ውስጥ ምን ያህሎቹ አልኮል ይጠጣሉ እና ለዚህም የሚረዱ ተዛማጅ ሁኔታዎችን መለየት ሲሆን ከጥናቱ የሚገኘው ውጤትም በሆስፒታል ውስጥ የሚገኙ ባለድርሻ አካላትና ድርጅቶች የእናቶች እና የሚወለዱ ህጻናትን ጤናማነት ለማሻሻል በሚያደርጉት የፕሮግራም ማሻሻያዎች እና ትግበራዎች ላይ የበኩሉን አስተዋጾ ይወጣል ተብሎ ይታሰባል:: ከዚህም በላይ በዋናነት ለማስተርስ ዲግሪ መመረቂያ የማሟያ ጥናታዊ ጽሁፍ ለማዘጋጀት ነው ::

ድርሻ እና ቆይታ: ለጥናቱ አስፈላጊውን መረጃ ለማግኘት መጠይቅ በመጠቀም ቃለ-መጠይቅ አደርግልዎታለሁ:: ቃለ-መጠይቁ 42 ጥያቄዎችን የያዘነው:: ለቃለ-መጠይቁ 30 ደቂቃ እንዲሰጡን በትህትና እጠይቃለሁ::

ሊያደርስ የሚችለው ጉዳትና የሚያስገኘው ጥቅም: ይህ ጥናት ከጊዜዎ ላይ 30 ደቂቃ ከመውሰድ ውጭ በአርስዎም ሆነ በልጅዎ ላይ ጉዳት አያመጣም:: በዚህ ጥናት በመሳተፍዎ በቀጥታ የሚያገኙት ክፍያ የለም:: ነገር ግን የዚህ ጥናት ውጤት በሆስፒታል እቅድ አውጪ የመንግስት አካላት ጠቃሚ መረጃ ሊሰጥ ይችላል:: ለእራስዎም አስፈላጊ የሆነ የጤና መረጃ ያገኛሉ::

ሚስጢራዊነት: የሚሰጡን መረጃ ሚስጥራዊነት የሚጠበቅ ሲሆን እንደ ግለሰብ ለይቶ የሚወሰድ መረጃ የለም:: የጥናቱ ውጤት የህብረተሰቡን አጠቃላይ ሁኔታ እንጂ የአንድን ግለሰብ ምንም ነገር አያንጸባርቅም:: የተሳታፊዎችን ስም ላለማሳየት ለመጠይቆቻችን የራሳችንን ቁጥር ሰጥተናቸዋል:: የጥናቱ ተሳታፊዎችን ከምርምሩ ጋር በማጣቀስ የሚሰጥ የቃልም ይሁን የጽሁፍ ሪፖርት የለም::

መብት

በዚህ ጥናት ውስጥ መሳተፍ ሙሉ በሙሉ በፈቃደኝነት ላይ የተመሰረተ ሲሆን በጥናቱ ለመሳተፍም ሆነ ላለ መሳተፍ የመወሰን መብት አለዎት። በፈለጉት ጊዜ ከጥናቱ መውጣት ይችላሉ። ይህን በማድረግዎም ማግኘት የሚገባዎትን ጥቅም አያስቀርብዎትም። በጥናቱ ወይም በመረጃ አሰባሰብ ዙሪያ ጥያቄ ወይም ያልተብራራ ነገር ካለ በሚከተለው አድራሻ ያግኙን።

ዋና አጥኚ አቶ አለሙ ብርሃኑ

ኢሜል: alemubirhanu888@yahoo.com

ስልክ ቁጥር: 0918444018

የሙሉ ፈቃደኝነት ማረጋገጫ

የተሳታፊዎችን መረጃ ወረቀት አንብቤዋለሁ/ ተነብቦልኛል። የጥናቱን አላማ፣ ክንዋኔ፣ ጥቅምና ጉዳት፣ ሚስጥራዊነት፣ መብት እና ለማንኛውም ጥያቄ የተሰጠውን የመገኛ አድራሻ በደንብ ተረድቼዋለሁ። ግልፅ ያልሆነ ጥያቄ ካለኝ እንደጠይቅ እድል ተሰጥቶኛል። በፈለግሁት ጊዜ ከጥናቱ መውጣት እንደምችል እንዲሁም መመለስ የማልፈልገውን ጥያቄ መመለስ እንደሌለብኝ ተነግሮኛል። ስለዚህ በዚህ ጥናት ለመሳተፍ ፈቃደኛ ነኝ።

የመረጃ ሰብሳቢ ስም እና ፊርማ _____

ስለ ትብብርዎ እናመሰግናለን!

13. ANNEXES

13.1 Data Collection Tool

13.1.1. Data collection tool (English version)

Date of interview (date/month/year): _____

Name of the hospital: _____

Code number of the questionnaire: _____

Interviewer's Name: _____ Signature _____

Supervisor's Name: _____ Signature _____

Part I: socio- demographic characteristics

Instruction: please encircle the number listed before the option to indicate your response and fill the black for without option.

S/no	Questions	Answers/choices	Skip
101	Age in years?	_____	
102	What is your religion?	1. Orthodox	

		<ul style="list-style-type: none"> 2. Muslim 3. Protestant 4. Others (Specify)_____ 	
103	What is your marital status?	<ul style="list-style-type: none"> 1. Single 2. Married 3. Divorced 4. Widowed 	
104	Ethnicity	<ul style="list-style-type: none"> 1. Amhara 2. Tigre 3. Oromo 4. Other 	
105	What is your educational status?	<ul style="list-style-type: none"> 1. Cannot read and write 2. Primary education 3. Secondary education 4. College and above 	
106	What is your occupation?	<ul style="list-style-type: none"> 1. Housewife 2. Merchant 3. Farmer 4. Employer 5. Other (specify)_____ 	
107	Residence	<ul style="list-style-type: none"> 1. Rural 2. Urban 	
108	Average monthly income of the household	-----Ethiopian Birr	

Part II : Questions regarding obstetric history and others			Skip
201	Gestational age	<ul style="list-style-type: none"> 1. First trimester 2. Second trimester 3. Third trimester 	

202	Did you receive ante natal care during your current pregnancy?	1. Yes 2. No	If no go to 204
203	If yes, to ques.202 Have you informed about alcohol during ANC visit?	1. Yes 2. No	
204	How many pregnancies have you had, including your current pregnancy?	1. One 2. Two 3. Three or more	
205	Number of alive children you have?	1. No child 2. One 3. Two 4. Three or more	
206	Is the current pregnancy planned?	1. Yes 2. No	
207	Have you had abortion before this pregnancy?	1. Yes 2. No	
Part III: Questions regarding Alcohol use and other substance			
301	Have you ever consumed Alcohol?	1. Yes 2. No	
302	Have you ever consumed alcohol during the current Pregnancy?	1. Yes 2. No	If no go to 307
303	If yes, to ques. No 302 Have you ever consumed alcohol in the first three months of current pregnancy?	1. Yes 2. No	
304	If yes, to ques. No 302 How often do you have a drink containing alcohol?	1. Less or equal to once a month 2. 2-4times per month 3. 2-3times per week 4. 4 and above per week	

305	What is the common alcoholic beverage that you take?	<ol style="list-style-type: none"> 1. Tella 2. Araqe 3. Tej 4. Beer 5. Wine 6. Whisky 7. Other (specify)..... 	
306	What is the reason to use alcohol during pregnancy?	<ol style="list-style-type: none"> 1. For relaxation 2. Socialization 3. Peer pressure 4. To get relief from stress 5. Other (specify)----- 	
307	Have your partner consumed alcohol?	<ol style="list-style-type: none"> 1. Yes 2. No 	
308	Have you ever chewed chat during pregnancy?	<ol style="list-style-type: none"> 1. Yes 2. No 	
309	Have you ever smoked cigarettes during the current pregnancy?	<ol style="list-style-type: none"> 1. Yes 2. No 	
Part IV: Questions regarding knowledge about the effect of Alcohol use on fetus during pregnancy			
401	Have you known about effects of alcohol on health?	<ol style="list-style-type: none"> 1. Yes 2. No 	
402	Have you considered alcohol has a beneficial effect on health?	<ol style="list-style-type: none"> 1. Yes 2. No 	
403	Have you considered alcohol is harmful during pregnancy?	<ol style="list-style-type: none"> 1. Yes 2. No 	
404	Have you considered a baby born to a woman who drinks alcohol regularly different from any other baby?	<ol style="list-style-type: none"> 1. Yes 2. No 	
405	Can maternal alcohol consumption affect the unborn child?	<ol style="list-style-type: none"> 1. Yes 	

		2. No	
406	If yes, to ques. 405, What types of effect of maternal alcohol consumption do you know?	1. Low birth weight 2. Mental retardation 3. Fetal alcoholic syndrome 4. Low intelligence quotient 5. Delayed development 6. Learning disabilities 7. Behavioral problems 8. Other specify-----	
407	If yes, to ques.405, How did you know that maternal alcohol consumption contributes to these conditions?	1. Media 2. Health worker 3. Family 4. Neighbor/peer 5. Others	
408	If yes, to ques.405, Have you noticed any of these problems within your family or communities?	1. Yes 2. No	
Part V: Questions regarding attitude about the effect of Alcohol use on fetus during pregnancy			
501	Has no effect on the baby	1. Agree 2. Disagree	
502	Should be stopped completely	1. Agree 2. Disagree	
503	Can be good for the pregnancy	1. Agree 2. Disagree	
504	Can be used occasionally	1. Agree 2. Disagree	
505	Can be used after you are a certain number of	1. Agree	

	months pregnant	2. Disagree	
506	Do you think problems can arise in the baby if you drink alcohol during pregnancy?	1. Yes 2. No	

Part VI; questions regarding assessment of perceived family social support by using the Multidimensional Scale of Perceived family Social Support (MPSSf)

Question	Very strongly disagree (1)	Strongly disagree (2)	Mildly disagree (3)	Neutral (4)	Mildly agree (5)	Strongly agree (6)	Very strongly agree (7)
601. my family really tries to help me							
602. I get the emotional help & support from my family							
603. I can talk about my problems with my family							
604. my family is willing to help me make decision							

13.1.2. DATA COLLECTION TOOL (AMHARIC VERSION)

የአማርኛ መጠይቅ

የቃለ መጠይቅ ቀን (ቀን / ወር / ዓመት): _____

የሆስፒታል ስም: _____

የመረጃ ሰብሳቢ: ስም: _____ ፊርማ _____

የተቆጣጣሪ ስም:-----ፊርማ-----

የመጠይቁ ቁጥር ኮድ: _____

ክፍል-1 ማህበራዊ ነክ መረጃዎች መመሪያ ከተዘረዘሩት ምርጫዎች መልስ የያዘውን ቁጥር በማክበብ እና ምርጫ ለሌላቸው ጥያቄዎች ክፍት ቦታውን በመሙላት ይመለሱ።

ተራቁ ጥር	ጥያቄዎች	ምላሽ	ይለፉት
101	እድሜዎት ስንት ነው?	-----አመት	
102	ሐይማኖትዎት ምንድን ነው?	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት	

		4. ሌላይግለፁ	
103	የጋብቻ ሁኔታ	1. ያላገባች 2. ያገባች 3. የፈታች 4. የሞተባት	
104	ብሔርዎት ምንድን ነው?	1. አማራ 2. ትግሬ 3. ኦሮሞ 4. ሌሎችይጠቀስ.....	
105	የትምህርት ደረጃዎት?	1. ማንበብና መጻፍ የማትችል 2. አንደኛ ደረጃ የተማረች 3. ሁለተኛ ደረጃ የተማረች 4. ድፕሎማና በላይ	
106	የስራ ሁኔታዎት ምንድን ነው?	1. የቤት እመቤት 2. ነጋዴ 3. አርሶ-አደር 4. ተቀጣሪ 5. ሌላ ይግለፁ-----	
107	መኖርያ ቤት	1. ገጠር 2. ከተማ	
108	ወርሃዊ የቤተሰብ ገቢዎት ምን ያህል ብር ነው?	-----	
ክፍል ሁለት: አሁን ደግሞ የወሊድ ታሪካዎትን እጠይቀዎታለሁ:			
201	የእርግዝና ወራትዎት ስንት ነው?	1. ከሦስት ወር በታች 2. ከሦስት አስከ ስድስት ወር 3. ከስድስት ወር በላይ	

202	በእርግዝና ጊዜዎ የቅድመ-ወሊድ ክትትል አድርገዋል?	1. አዎ 2. የለም	
203	ለጥያቄ ቁ 202 አዎ ካሉ ስለአልኮል ከጤና ባለሙያ ምክር ተመክርወ ያወቃሉ?	1. አዎ 2. አላውቅም	አላውቅም ካሉ ወደ 204 ይሻገሩ
204	የአሁኑን ጨምሮ ስንት ጊዜ አርግዘዋል?	1. ይህ የመጀመሪያዬ ነው 2. ሁለት ጊዜ 3. ሦስትና ከዚያ በላይ	
205	በህይወት የሚኖሩ ስንት ልጆች አሉዎት?	1. የለኝም 2. አንድ 3. ሁለት 4. ሦስትና ከዚያ በላይ	
206	የአሁኑ እርግዝና ታስቦት ነው የተረዘመ?	1. አዎ 2. አይደለም	
207	ከዚህ በፊት የጽንሰ ወርጃ አጋጥሞዎት ያወቃሉ?	1. አዎ 2. የለም	
ክፍል ሶስት: አሁን ደግሞ በህይወት ጊዜዎ እና በአሁኑ እርግዝና ወራትዎ ስለአልኮል ተጠቃሚነትዎን ስለመጠየቅ:			
301	በህይወትሽ / ከአርግዝና በፊት አልኮል መጠጦች/ቢራ፣ ወይን፣ ጠላ፣ የመሳሰሉትን ተጠቅመዋል?	1. አዎ 2. አልተጠቀምኩም	
302	እርጉዝ ከሆኑ በኋላ አልኮል ጠጥተው/ተጠቅመው ያወቃሉ?	1. አዎ 2. አላውቅም	አላውቅም ካሉ ወደ 307 ይሻገሩ

303	ለጥያቄ ቁ 302 አዎ ካሉ በመጀመሪያዎቹ ሦስት ወራት ውስጥ አልኮል ጠጥተው/ ተጠቅመው ያውቃሉ?	<ol style="list-style-type: none"> 1. አዎ 2. አላውቅም 	
304	ለጥያቄ ቁ 302 አዎ ካሉ በእርግዝና ወራትዎ አልኮል ተጠቅመው ካወቁ ብዙጊዜ የሚጠጡት አንዴት ነው?	<ol style="list-style-type: none"> 1. በወር አንድ ጊዜ እና ከዚያ ያነሰ 2. በወር ከሁለት እስከ አራት ጊዜ 3. በሳምንት ከሁለት እስከ 3 ጊዜ 4. በሳምንት አራትና ከዚያ በላይ 	
305	በብዛት ጠጥተው/ ተጠቅመው የሚያቁት አልኮል ምንድን ነው?	<ol style="list-style-type: none"> 1. ጠላ 2. አረቄ 3. ጠጅ 4. ቢራ 5. ወይን 6. ዊስኪ 7. ሌላ----- 	
306	በእርግዝና ጊዜዎት አልኮል ለምን ይሆን የሚጠጡት?	<ol style="list-style-type: none"> 1. ለመዝናናት 2. ለማህበራዊ ኑሮ 3. የንደኛ ግፊት 4. ከጭንቅት ለመዳን 5. ሌላ ካለ ይግለጹ----- 	
307	የእርስዎ ባለቤት አልኮል ይጠጣል?	<ol style="list-style-type: none"> 1. አዎ 2. የለም 	
308	እርጉዝ ከሆኑ በኋላ ጫት ቅመዉ/ ተጠቅመው ያውቃሉ?	<ol style="list-style-type: none"> 1. አዎ 2. አላውቅም 	

309	እርጉዝ ከሆኑ በኋላ ሲጋራ አጭሰው/ ተጠቅመው ያውቃሉ?	1. አዎ 2. አላውቅም	
ክፍል አራት: በእርግዝና ወራት አልኮል መጠጣት በጽንሱ ላይ ያለውን ተጽዕኖ ለመረዳት ያለዎትን እውቀት ለማወቅ የተዘጋጀ መጠይቅ:			
401	አልኮል በጤና ላይ ያለውን ተጽእኖ ያውቃሉ?	1. አዎ 2. አላውቅም	
402	አልኮል ለጤና ጥቅም ይሰጣል ብለው ግምት ውስጥ አስገብተው ያውቃሉ?	1. አዎ 2. አላውቅም	
403	አልኮል ለእርግዝና ጎጂ መሆኑን ያውቃሉ?	1. አዎ 2. አላውቅም	
404	አልኮል ከሚጠጡ እናቶች የተወለደ ህጻን ከሌሎች ህጻናት ይለያል ብለው ግምት ውስጥ አስገብተው ያውቃሉ?	1. አዎ 2. አላውቅም	
405	በእርግዝና ወራት አልኮል መጠጣት በጽንሱ ላይ ጉዳት/ተጽእኖ እንደሚያደርስ ያውቃሉ?	1. አዎ 2. አላውቅም	
406	ለጥያቄ ቁ 405 አዎ ካሉ ምን አይነት ጉዳት/ተጽእኖ ያደርሳል?	1. የክብደት ዝቅጠኛ መሆን 2. የአእምሮ ዘገምተኛ መሆን 3. የአፈጣጠር ችግር 4. የአስተሳሰብ ለእለህሌና አናሳ መሆን 5. የአፈጣጠር ችግር 6. የመማር ጉድለት 7. የባህርይ ችግር	

		8. ሌላ-----	
407	ለጥያቄ ቁ 405 አዎ ካሉ ይህን ጉዳት/ተጽእኖ እንደሚያደርስ እንዴት አወቁ?	1. ከመገናኛ ዘዴዎች 2. ከጤና ባለሙያ 3. ከጎረቤት/ ከጓደኛ 4. ከሌሎች	
408	ለጥያቄ ቁ 405 አዎ ካሉ ይህን ጉዳት/ተጽእኖ ከቤተሰብ ወይም ከጎረቤት አስተዋለዉ ያወቃሉ?	1. አዎ 2. አላወቅም	
ክፍል አ ምስት: በእርግዝና ወራት አልኮል መጠጣት ያለዎትን ጠባይ/ሁኔታ ለማወቅ የተዘጋጀ መጠይቅ:			
501	በፅንሱ ላይ ምንም ጉዳት የለዉም	1. እስማማለሁ 2. አልስማማም	
502	አልኮል መጠቀም ሙሉ በሙሉ መቆም አለበት	1. እስማማለሁ 2. አልስማማም	
503	ለእርግዝና አልኮል መጠቀም ጥሩ ሊሆን ይችላል	1. እስማማለሁ 2. አልስማማም	
504	አልፎአለፎ መጠቀም ይቻላል	1. እስማማለሁ 2. አልስማማም	
505	ከተወሰነ የእርግዝና ወራቶች በኋላ መጠቀም ይቻላል	1. እስማማለሁ 2. አልስማማም	
506	በእርግዝና ወራት አልኮል መጠቀም በፅንሱ ላይ ችግር ያመጣል ብለዉ ያስባሉ?	1. አዎ 2. አይደለም	

ክፍል ስድስት: የቤተሰብ ማህበራዊ ድጋፍን በተመለከተ							
ጥያቄዎች	እጅግ በጣም አልስማም (1)	በጣም አልስማም (2)	በትንሹ አልስማም (3)	ገለልተኛ (4)	በትንሹ እስማማለሁ (5)	በጣም እስማማለሁ (6)	በጣም እስማማለሁ (7)
601. ቤተሰቤ በትክክል ለመርዳት ይሞክራሉ							
602. ከቤተሰቦቼ የምፈልገውን ስሜታዊ የሆነ እርዳታ/ እንክብካቤ አገኛለሁ							
603. ከቤተሰቦቼ ጋር ስለ ችግሮቻቸው መወያየት እችላለሁ							
604. ቤተሰቦቼ ውሳኔዎችን እንድወስኑ ለማገዝ ፍቃደኛ ናቸው							