MAGNITUDE OF SUBSTANCE USE AND ASSOCIATED FACTORS AMONG PREGNANT WOMEN ATTENDING ANTENATAL CARE AT JIMMA TOWN PUBLIC HEALTH FACILITIES, JIMMA ZONE, OROMIA REGIONAL STATE, SOUTHWEST ETHIOPIA, 2017

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A THESIS SUBMITTED TO JIMMA UNIVERSITY INSTITUTE OF HEALTH, FACULTY OF HEALTH SCIENCE, SCHOOL OF NURSING AND MIDWIFERY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN MATERNITY HEALTH NURSING.

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JIMMA UNIVERSITY

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Abstract

Background: Use of substance such as alcohol, khat leaves and tobacco have long been recognized as one of the leading causes of human suffering and become one of the rising major public health and socioeconomic problem worldwide. There was no studies conducted to investigate the prevalence and associated factors of substance use among pregnant women in the study area.

Objective: Toassess the magnitude of substance use and associated factors among pregnant women attending antenatal care in Jimma Town public health facilities, southwest Ethiopia, 2017.

Methods: Facility based cross sectional study design was conducted among pregnant women in Jimma Town public health facilities from March 10 to April 10/2017.A systematic random sampling technique was used to select a total of 296 study participants. Data was collected by interviewer administered structured questionnaire after pretest was done. The collected data was cleaned, coded and entered in to Epi data version 3.1 and exported to and analyzed using SPSSversion 21 statistical package. Multivariate logistic regressions models was fitted to control the effect of confounding variables. Adjusted Odds ratios calculated with 95% confidence intervals and α =5% with significant level of $P<0.05$.

Results: The overall substance use prevalence was found to be 37.9 %.Factors associated with substance use among pregnant women were education status (being able to read and write) with (AOR= .091 95% CI: (.014, .574)), respondent's husband occupational status being others (AOR=.188 95% CI:(.036, .974)), gestational age being second trimester(AOR= 3.325 95% CI: (1.298, 8.251)), and pregnant women who didn't have a family history of substance use(AOR= .122 95% CI: (.066, .228)).

Conclusion and recommendation: The overall prevalence of substance use among the pregnant women in this study was high. The study also revealed that educational status, family history of substance use, occupational status and gestational age were found to be associated with substance use. Health care providers and concerned bodies have to educate and counsel pregnant women and families about harmfulness of substance use for minimize its prevalence and associated factors of substance use.

Key words: Substance use, pregnant women, magnitude, Jimma, Ethiopia

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Abbreviations/ Acronyms

ANC	Ante Natal Care
AOR	Adjusted Odd Ratio
ASPE	Assistant Secretary for Planning and Evaluation
CI	Confidence Interval
COR	Crude Odd Ratio
EDHS	Ethiopia Demographic Health Survey
ETB	Ethiopian Birr
FAS	Fetal Alcohol Syndrome
HC	Health Center
HH	House Hold
IUGR	Intrauterine Growth Retardation
IRB	Institutional Review Board
JUMC	Jimma University Medical Center
LBW	Low Birth Weight
NSDUH	National Survey on Drug Use and Health
ORHB	Oromia Regional Health Bearo.
SD	Standard Deviation
SPSS	Statistical Package for the Social Sciences
WHO	World Health Organization

Chapter one: Introduction

1.1. Background

Substance use is referred to as use of any substances like alcohol, khat, cigarettes and others in an individual to alter mood or behavior. Use of substance such as alcohol, khat leaves and tobacco have long been recognized as one of the leading causes of human suffering and become one of the rising major public health and socioeconomic problem worldwide.(1-3).

Substance abuse is a maladaptive pattern of use that results in clinically significant functional impairment without satisfying the criteria for substance dependence. Abuse is indicated by any one of the following: failure to fulfill reasonable obligations, drug use in dangerous situations, and continued use despite recurrent legal, social, and psychological problems associated with the substance.(2).

The prevalence of substance use among women of reproductive age continues to increase. Substance use during pregnancy can affect the developing fetus both directly, through passage of the placenta, and indirectly, through poor maternal health habits and environmental conditions (4). Alcohol and substance use by women during pregnancy has also been reported to be widespread and can affect the unborn fetus with the potential for lifelong disabilities (5).

Khat (Catha edulis), a psycho stimulant substance, is thought to be the second most widely used substance in Ethiopia. Khat is an ever green plant that grows mainly in Ethiopia, Kenya, and Yemen and at high altitude in South Africa and other African countries (6).It is estimated that as many as ten million people worldwide chew Khat. In one large study in Yemen, 82% of men and 43% of women reported at least one life time episode of Khat use and up to 40% of Khat users develop tolerance to, and a dependence on Khat. (7).

Prenatal alcohol exposure can result in major organ birth defects, growth disorders and damage to multiple structures in the brain resulting in permanent and lifelong disabilities. There is no known safe level of alcohol consumption during pregnancy. Despite some recent research suggesting otherwise; the standard of care remains avoidance of all alcohol use during pregnancy.(8)

Use of multiple substances is common and compounds the potential impact on the pregnancy and can make treatment more challenging. Stimulants such as cocaine and methamphetamine can have potential effects on central nervous system, cognitive function and behavior.(9). Recent research shows tobacco use during pregnancy is associated with cognitive function and behavior disorders as well as certain birth defects.(10)

The prevalence of alcohol use in pregnant mothers in Ethiopia varies from place to place. According to the Ethiopian Demographic and Health Survey (EDHS) 2011, the prevalence of alcohol use among women is 45% and 11% of women ever chewed khat (11).

1.2. Statement of the problem

The global burden of disease attributable to alcohol accounts 5.4% and tobacco use 3.7% of the total burden of disease. Disorders due to psychoactive substance use including alcohol, drug, and tobacco dependence are the main underlying conditions ultimately responsible for the largest proportion of the global burden of disease attributable to substance use (12).

Use of alcohol and other psychoactive substances during pregnancy can lead to multiple health and social problems for both mother and child, including miscarriage, stillbirth, low birth weight, prematurity, physical malformations and neurological damage.(13)

According to a national survey conducted in the United States in 2012, 8.5% of pregnant women drink alcohol and 15.9% smoke cigarettes, resulting in over 550,000 exposed to alcohol and over one million exposed to tobacco in utero. (14)

Research shows that use of tobacco, alcohol and abuse of prescription drugs by pregnant women can have severe health consequences for infants. This is because many substances pass easily through the placenta, so substances that a pregnant woman takes also, to some degree, reach the baby (15).

Recent research shows that smoking tobacco or marijuana, taking prescription pain relievers, or using illegal drugs during pregnancy is associated with double or even triple the risk of stillbirth (16)

The study of Abd-El-Aziz and Ahmed, in Ethiopia, showed that neonates of mothers who chewed Khat during pregnancy had a significant decrease in all neonatal parameters such as birth weight, length, head circumference and Apgar score at 1 and 5 minutes in comparison with those of mothers who did not chew Khat during pregnancy, this effect was found to increase in severity with the increased frequency and duration of Khat chewing during pregnancy.(17)

Though alcohol consumption, khat chewing and cigarette smoking have become common practices among pregnant women in Ethiopia, only very few studies have assessed their magnitude and the associated factors (18) and to the knowledge of the principal

investigator in Ethiopia only few studies has been conducted on substance use during pregnancy.

Therefore, the purpose of this study was to investigate the prevalence of substance use and associated factors among pregnant mother attending antenatal care in Jimma town public health facilities.

1.3. Significance of the study

The purpose of this study is to provide detailed representative information on substance use in jimma public health facilities, and assess the associated factors of substance use. However, to increase the knowledge of pregnant women on substance use and its associated factors are important to aid the planning of action to improve the quality life of pregnancy mothers, reduce and control the effects and prevalence of substance use during pregnancy in the future.

In addition the results of the study will also add the evidence about pregnant women recognition of substance use and it will help health professionals to identify the gap. Policy makers and stakeholders with up to date information for future planning and interventions and to fill the knowledge gap on the substance use during pregnancy. Therefore, this study aimed to close the gap in generating first-hand information on the issue and the data will serve as base line for future study.

Chapter two: Literature Review

The united nations reported that About 230 million people, or 5 per cent of the world's adult population, are estimated to have used an illicit drug at least once in 2010 (19).

The study conducted in United States the prevalence of any substance use during pregnancy was 25.8%; the prevalence of cigarette and alcohol use were 18.9% and 10%, respectively. Additionally, women who were employed and married compared to the first were significantly less likely to have used any substance during pregnancy, adjusting for age, ethnicity and income.(20).

Although the study conducted in United States among pregnant women aged 15 to 44 in 2012-2013, an annual average of 9.4 percent reported current alcohol use. Current alcohol use in 2012-2013 was lower during the second and third trimesters than during the first trimester (5.0 and 4.4 percent vs. 19.0 percent)." And current cigarette use were 19.9 percent in the first trimester, 13.4 percent in the second trimester, and 12.8 percent in the third trimester.(21)

Sub Saharan Africa has become increasingly vulnerable to illicit drug production, trafficking, and consumption. Historically, a number of sub-Saharan African countries were sources for large scale trafficking of indigenously cultivated cannabis (22).

According to the Study conducted in Jos Plateau State Nigeria the prevalence of substance used among the pregnant women was found to be 10.8% and alcohol was the most abused substance (5.4%) %) and cigarette (1.5%). Where marital status, educational level and employment status were found to be significantly associated with substance abuse among these pregnant women. Miscarriage and pre-term delivery was found to be more among women who abuse substances on pregnancy compared to those who did not (p=0.008 and p=0.047 respectively) and Lower level of education (none or primary) and unemployment predisposed pregnant women to substance abuse. One hundred and two (78.5%) of the pregnant women said they were aware of the effect of substance abuse on pregnancy and their source of information was mainly hospital (63.7%) followed by media (19.6%) and friends (16.7%). (23).

Study conducted in Geneva showed that about 36.3% of the women drank alcohol during pregnancy (24). 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 (25). A study done 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 (26) .

According to the Study conducted in Yemen the prevalence of khat was 40.7% of the women reported chewing khat during pregnancy and the proportion of women who chewed khat is greater among older women aged 25–49 years (43.9%) compared with those who are less than 25 years of age (32.8%). Khat chewing during pregnancy is higher among women with no education (44.7%) and those working (44.0%) compared to other women. Although rural residence, living in mountainous regions and low income were significant risk factors for chewing khat. (27)

Different studies have revealed that there are various factors for pregnant women to use substances. The factors of drug taking generally have been regarded as determined by a combination of the abnormal properties of the drug, characteristics of the user and the nature of the person's environment. Some of these reasons include peer pressure, age factors and socializationinfluence.(28).

Substance use is a growing problem in Ethiopia, as in many developing countries. Alcohol and khat are the most frequent substances of use, followed by cannabis and solvents (29)

The Ethiopia Demographic andHealth Survey (2011) found that 45 % of women reported drinking alcohol at some point in their lives with great variations in different parts of the country ranging from 2% in Somali to 86% in Tigray and for women increases with age, and it is higher among urban residents than rural residents (30).

According to the Study conducted in Bahir-Dar Town, Northwest Ethiopia, 2014 the prevalence of alcohol use during pregnancy was 34 %. Being encouraged/ invited an alcohol to drink by someone aware of her pregnancy, being married, attaining higher educational

status, unemployment, unplanned pregnancy and null parity were found to predict alcohol consumption during pregnancy. Unplanned pregnancy had also increased likelihood of drinking during pregnancy (AOR = 3.12; 95% CI: (1.85, 5.28). On the contrary, pregnant mothers who had a child were less likely to consume alcohol during pregnancy as compared to those who are null para mothers (AOR= 0.15; 95% CI 0.06, 0.37)(31)

Maternal alcohol consumption often occurs in conjunction with other risk factors like smoking and family history of alcohol abuse and so it is difficult to attribute the effects to fetal alcohol exposure or to the characteristics of the mother and the child's home environment (32).

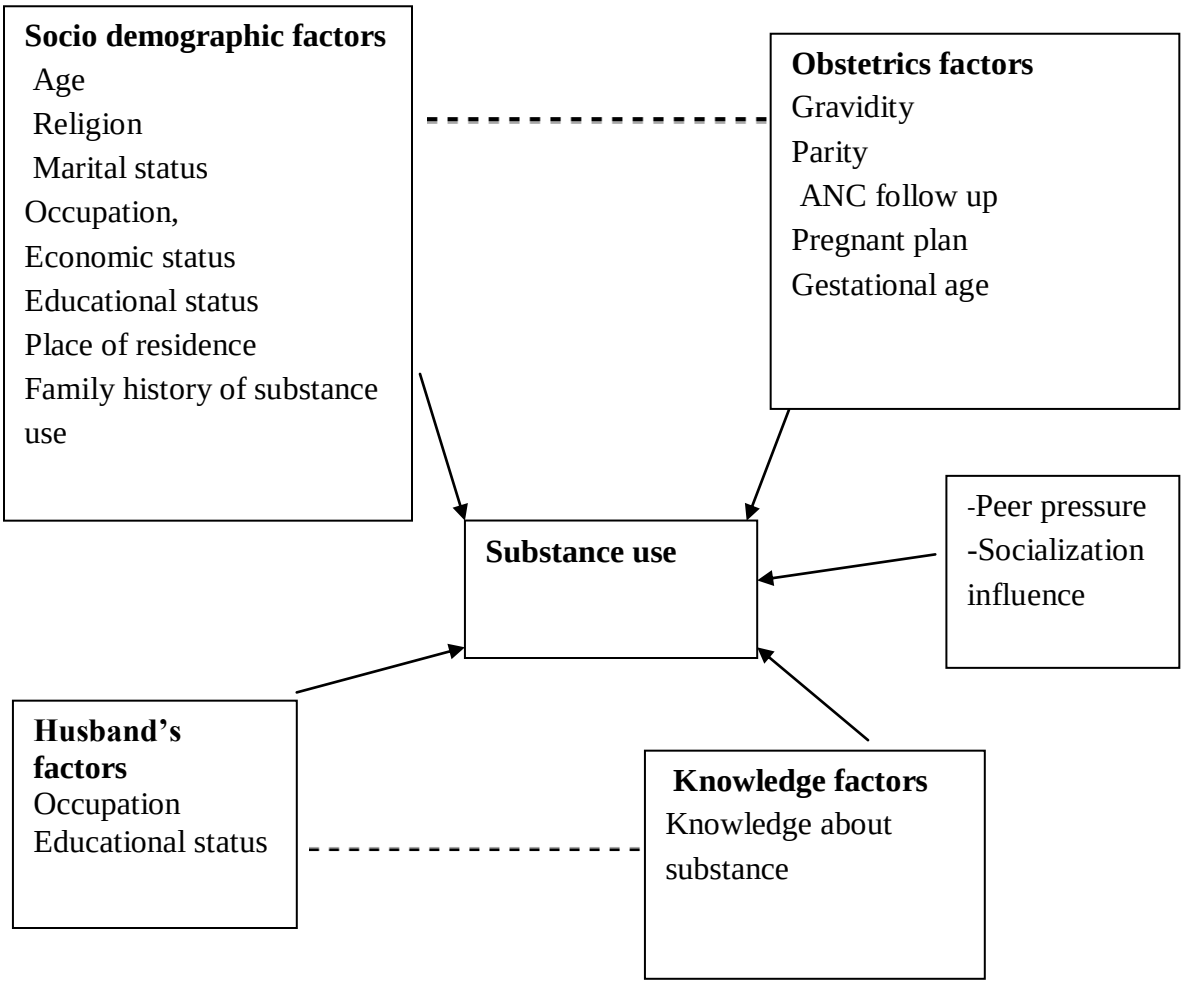


Fig.1. Conceptual frame work substance use and associated factors among pregnant women adapted from different literatures. (23, 31).

Chapter three: Objectives

3.1 General objective

To assess magnitude of substance use and associated factors among pregnant women attending Antenatal Care at Jimma Town public health facilities, Jimma Zone, south west Ethiopia, 2017.

3.2 Specific objectives

-To determine the magnitude of substance use among pregnant women in Jimma Town public health facilities, 2017.

-To identify associated factors of substance use among pregnant women in Jimma Town public health facilities, 2017.

Chapter four: Methods and Materials

4.1 Study area and period

The study was conducted in six health facilities in Jimma Town. Jimma Town is located to Southwest of Ethiopia at 352 Km from Addis Ababa. According to 2017 town health office plan, estimated total population of Jimma Town are 194,139. Among which, 6736arepregnant women, 35788 are non-pregnant women and 42720 are women of child bearing age. Jimma Town has 4(four) public health centers and 2(two) public hospitals.

It is found latitude of 7°40′N and longitude of 36°50′E. Jimma town is found in an area of average altitude of about 1780 m above sea level. The annual rainfall ranges from 1138 mm to 1690 mm. It receives high rain fall between June to August and mean annual maximum temperature of 30°C and a mean annual minimum temperature of 14°C. Jimma

The study was conducted from March 10-April 10/2017.

4.2 Study design

A facility based cross sectional study designwas employed.

4.3. Population

4.3.1. Source population

All pregnant women attending ANC in Jimma Town public health facilities.

4.3.2. Study population

All Sampled pregnant women attending ANC in Jimma Town public health facilities during the study period.

4.4. Inclusion and exclusion criteria

4.4.1. Inclusion criteria

Pregnant women who were attending ANC service during the time of data collection was included.

4.4.2 Exclusion criteria

Pregnant women who were critically ill and unable to hear or speak were my exclusion criteria but nobody were excluded.

4.5. Sample size and sampling technique

4.5.1. Sample size determination

The required sample size for the prevalence of substance use was determined manually using single population proportion formula considering 34% prevalence of Alcohol use from other study(31) with confidence interval of 95% and α=0.05, as follows:

$ni= ((Z\alpha/_2)^2 p (1-p)) /d^2$

$ni= ((1.96)^2*0.34(1-0.34)) /(0.05)^2$, ni= 345

Where, **ni**= initial sample size

Z = reliability coefficient for Confidence interval (CI) for 95% = 1.96

p= proportion ANC attending pregnant women with substance use at 34%

q=1-p=0.66, where p=0.34

d= margin of error 5 %

The sample size for associated variables with substance use were calculated by Epi Info version 7 Stat.Calc considering 95% CI and power 80% as shown in the following table.

Table 1: sample size estimation using predictors of substance use among pregnant women, 2017

Associated factors	**% of among unexposed**	**AOR**	Calculated Sample size	reference
Prevalence of alcohol	34		345	KirubelAnteab and Balem Demtsu,2014
Un planned pregnancy	82.4	3.12	298	
Being married	68.7	0.15	178	
Un employed	67.3	3.11	170	

The sample size for the prevalence of substance use was the largest than the sample size calculated for associated factors with substance use. Therefore, the sample size for the prevalence of substance use was used as a final sample size for this study using correction formula.

Since N is < 10,000, using the correction formula, where N=**1227** pregnant women visited previous average of three months.

nf= ni / (1+(ni/N)) ≈269

Where, nf = final sample size

ni= Initial sample size

N= Total pregnant women visited average of recent quarter.

Considering non response rate of 10 % was added to the sample, total sample size was:**296**pregnant women

4.5.2 Sampling technique

The calculated sample size was distributed to the six public health facilities using proportional to size based on total pregnant women visited at ANC in average of recent quarter to assure representativeness. In this allocation, total number of pregnant women visited at ANC in six (6) public health facilities during the recent quarter from October 8/2016 to December 8/2017which was taken 3681 pregnant women.

Average of pregnant women visited ANCin recent three months were 1227. From those231Jimma Health Center, 104Bacho Bore Health center, 170 higher 2◦ Health center,130Mandara Kochi Health center, 351 JUMCand 241 Shenen Gibe Hospital then equal proportional allocated for each health facilities.

The study subjects was selected by systematic random sampling every four k interval (k=4) from each health facilities based on inclusion criteria.

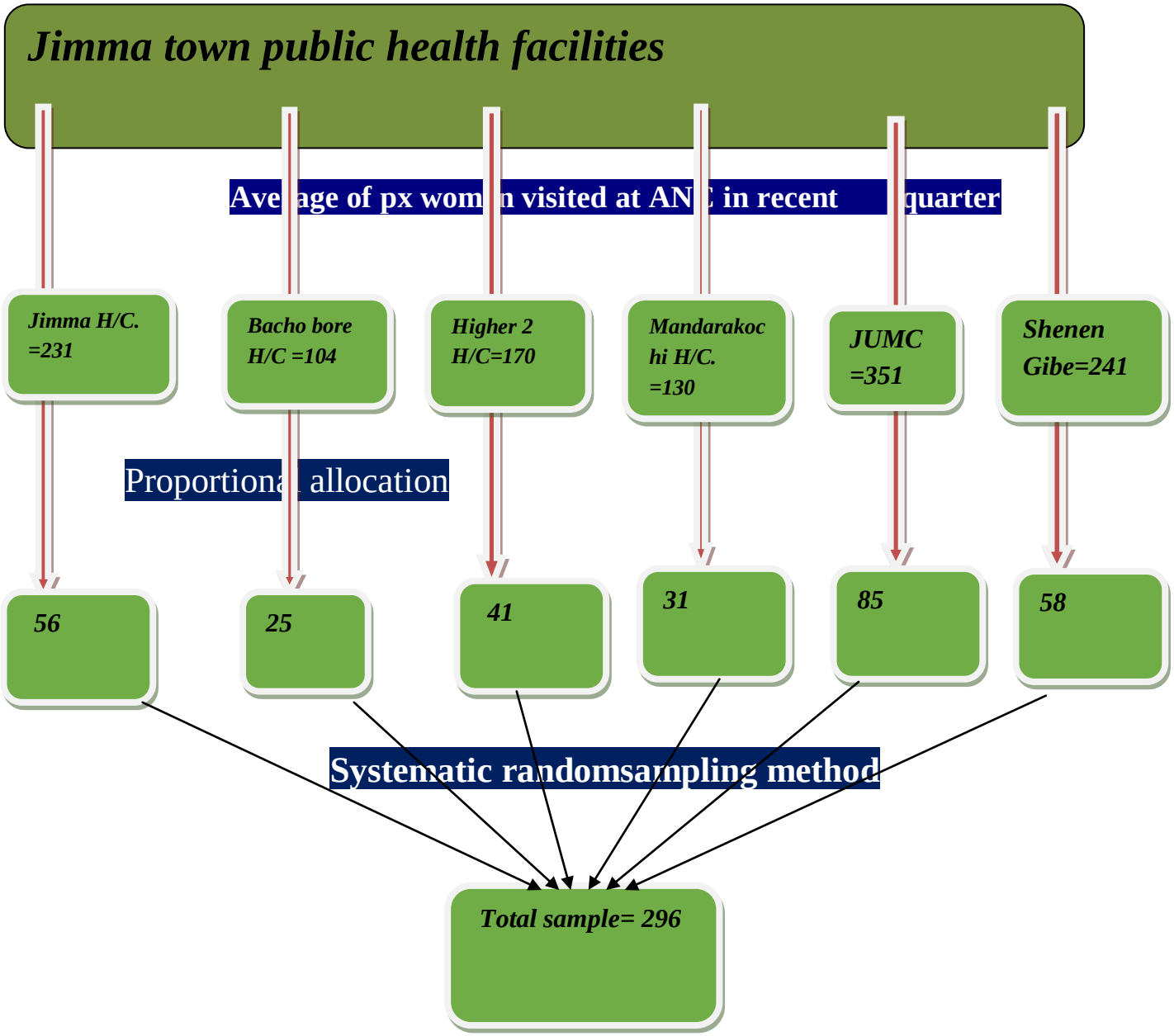


Figure 2 : Schematic presentation of sampling procedure of magnitude of Substance use and its Associated Factors among pregnant women attending ANC Jimma Town public health facilities, Jimma Town, Southwest Ethiopia, 2017.

4.6. The study variables

4.6.1. In dependent variables

- Socio-demographic characteristics like (age, marital status, religion, educational status, economic status, occupation, ethnicity, place of residence, and Family history of substance use).

-Obstetric factors (Gravidity, parity, gestational age, number of ANC visit, pregnancy plan status)

-Husband factors (occupation, educational status)

-Knowledge factors

- Experience related to substance use questions

4.6.2. Dependent variables

- Substance use

4.7. Procedure for data collection techniques and instruments

Data collection tool was adapted from different literatures and modified according to local context. (26,33).The questionnaire was prepared originally in English and then translate in to Afan Oromo and Amharic and back to English and finally was administered to the respondents in Afan Oromo and Amharic to make the information easily understood by the data collectors and respondents during data collection and to get consistence information. The questionnaire consists of Socio-demographic characteristics, obstetric factors questions, knowledge questions and experience of substance use questions.

Data was collected by interviewer administered structured questionnaire. Data collectors were diploma in midwifery and supervisors were BSc in midwifery. There were 6 data collectors, 2 supervisors and the overall activities was supervised by principal investigator. Supervisors checked the completeness of the collected data daily.

4.8. Operational definitions

Substance: Any non-medical psychoactive stimulants used by study subjects such as alcohol, khat and cigarette.

Substance Use. A pregnant women who used any substance at least once (alcohol, khat and cigarettes) in an individual life during pregnancy.(34)

Current User. A pregnant women who used any substance at least once in the current pregnancy before study period.

Alcohol. Referred to as use of psychoactive substances like beer, wine, local areke and others alcoholic-liquors beverages.(34)

Good knowledge: If participants respond from eight knowledge question was greater than mean value 50%.

Poor knowledge:If participants respond from eight knowledge question was less than mean value 50%.

4.9. Data quality control

Training was given to the data collectors and supervisors by the principal investigator for 2 days on the objective of the study, the methods of data collection, Confidentiality of information, Informed consent, how to recruit interview and how to fill the questionnaires based on a prepared instruction and data collectors were collected tools with respect to the study with practical exercises.

Pre-testing of the questionnaire was carried out in the other public health facilities of the actual study area in Serbo health center on 10% of the final sample size (30 respondents). Serbo health center is located at 22km from Jimma town. During the pre-test, the questionnaire was assessed for its consistency, clarity, understandability and completeness of the questionnaire. The internal consistency of the items was checked by computing crombach's alpha; it was 0.72 for socio demographic questions part, 0.70 for obstetric questions and experience related to substance use questions part and 0.73 for knowledge questions parts.

4.10. Procedure for data processing and analysis

The collected data was cleaned, coded and entered into Epi Data Version 3.1 and exported to SPSS then analyzed using SPSS version 21.0. Descriptive and summary statistics was done. Both bivariate and multivariate logistic regression analysis was used to determine the association of each independent variable with the dependent variable. Those variables with a p value < 0.25 in bivariate analysis was a candidate for multivariate analysis and those variables with a p value < 0.05 was considered as significant in multivariate analysis. Hosmer -Lemeshow goodness-of-fit statistic was done with p-value >0.05 which proved the model was good.

4.11. Ethical Consideration

Ethical clearance was obtained from IRB of Jimma University. Official letter that explains the objectives of the study was written to Jimma Town health bureau from the institute of health. Moreover all study participants was informed verbally about purpose and benefit of the study along with their right to refuse. Verbal consent was obtained from each study participants. Confidentiality and privacy of study participants was assured by using questionnaire identification numbers and privacy by removing names and other identifiers during interview.

4.12. Dissemination of finding

The findings of this study will be presented to Jimma University, faculty of health Science and School of nursing and midwifery. Although it will be disseminated to local governmental and non-governmental organizations working in the area through presentations on conferences, Jimma Town public health facilities, Jimma Zone Health Bureau, ORHB as well as to the community; with that, it will help them to improve the problem. Further effort will be made to publish in national and international journals.

Chapter five. Results

5.1. Socio-demographic characteristics of the study participants

Out of 296 sampled women 293 were interviewed making a response rate to be 98.9 %. Of the total 293 respondents, 147 (50.2%) were age ranged from 25 to 34 years with a mean age of 26 (SD = ±5.282years). From the total participants, 153 (52.2%) were Muslims followed by Orthodox 86(29.4%) and 125 (76.8%) were from urban area. As to marital status, 282(96.2%) were married, 102(34.8%) attended primary education and 148(50.5%) were house wife by occupation and 102(34.8%)of respondent's husbandswere merchant,(Table 1).

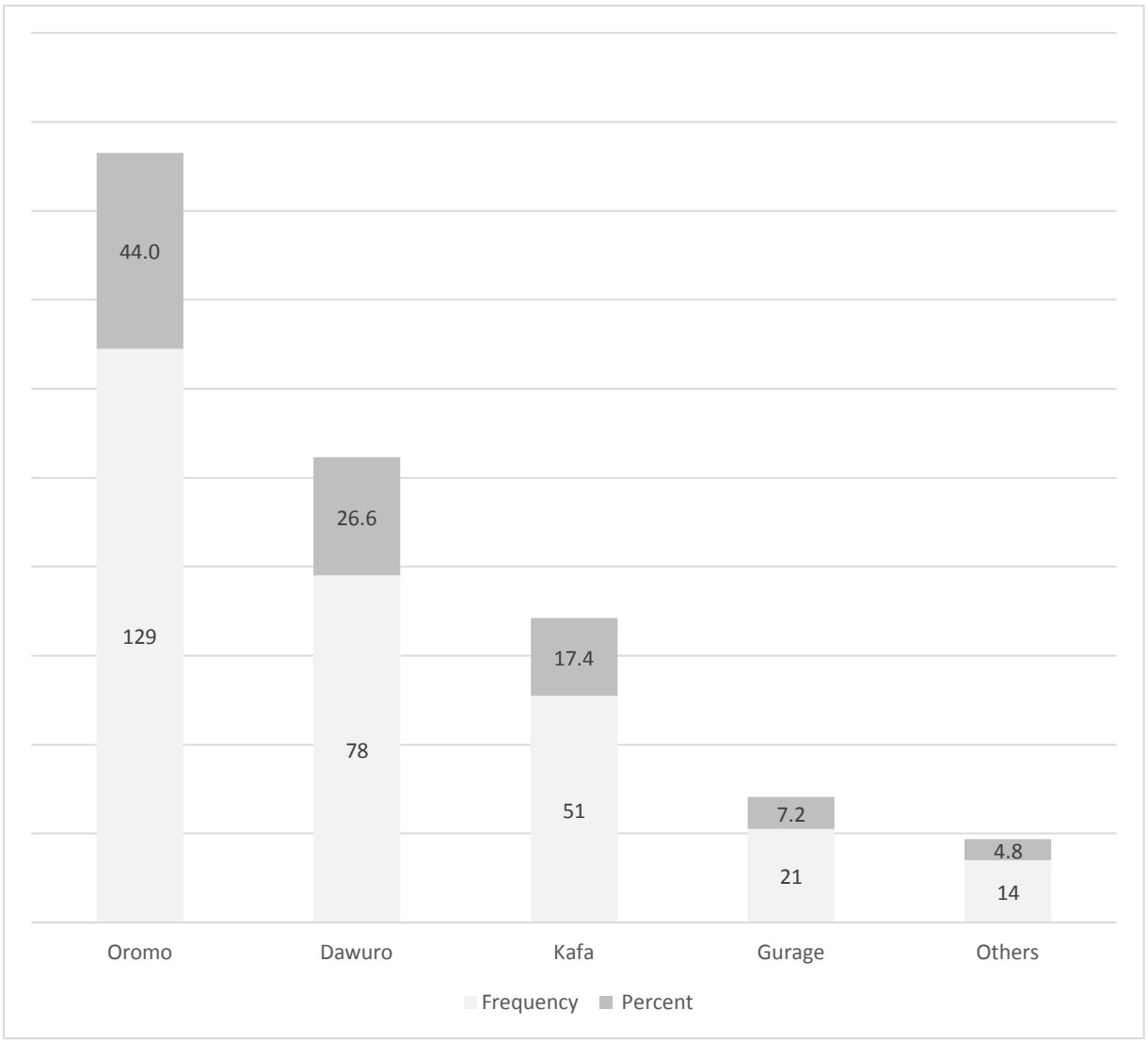
Table 2: Socio demographic characteristics of pregnant women in Jimma Town public health facilities, Jimma zone, Oromia region, south west of Ethiopia, 2017.

Variables	Category	Frequency	Percentage (%)
Age	15-24	114	38.9
	25-34	147	50.2
	>= 35	32	10.9
	Total	293	100.0
marital status	married	282	96.2
	single	5	1.7
	widowed	2	.7
	divorced	4	1.4
	Total	293	100.0
Religion of respondent	orthodox	86	29.4
	Muslim	153	52.2
	protestant	48	16.4
	Others*	6	2.0
	Total	293	100.0
Education status of respondent	can't read and write	60	20.5
	Canreadandwrite	30	10.2
	primary(1-8)	102	34.8
	secondary(9-12)	58	19.8
	Collegeandabove	43	14.7
	Total	293	100.0
	can't read and write	34	12.1
	Can read and write	27	9.6

Education status of respondent's husband	primary(1-8)	79	28.0
	secondary(9-12)	59	20.9
	College and above	83	29.4
	Total	282	100.0
Occupation status of respondent	merchant	73	24.9
	Government employee	51	17.4
	farmer	12	4
	housewife	148	50.5
	Others**	9	3
	Total	293	100.0
Occupation status of respondent's husband	merchant	102	34.8
	Government employee	80	27.3
	farmer	40	13.7
	Private employee	47	16.0
	Others**	13	4.6
	Total	282	97.6
Average HH monthly income	<1000	157	53.6
	1000 - 2000	42	14.3
	2001 - 3000	46	15.7
	3001 - 4000	20	6.8
	4000+	28	9.6
	Total	293	100.0

Note: *= (waqefata, catholic) **= (student, daily labour)

The most of the respondents were Oromo 129(44%) by ethnicity. (fig.3)



Note: Others = (Amara, Wolaita, Yem,Hadiya)

Figure: 3. Ethnicity of pregnant women in Jimma Town public health facilities, Jimma zone, Oromia region, south west of Ethiopia, 2017.

5.2. Obstetrics characteristics of respondents

The study finding indicated that majority of the respondents 196(67%) were multigravida and245(83.6%) were planned pregnancy. One hundred sixty two (82.7%) reported to have antenatal care follow up at during pregnancy.(Table 2).

Table: 3. Obstetrics characteristics of pregnant women in Jimma Town public health facilities, Jimma zone, Oromia region, south west of Ethiopia, 2017.

Variables	category	frequency	Percentage (%)
Gravidity	Primgravida	97	33
	Multigravida	196	67
Status of pregnancy	Planned	245	83.6
	Unplanned	48	16.4
	Total	293	100.0
follow up ANC during pregnancy	Yes	162	82.7
	No	34	17.3
	Total	196	100.0
Gestational age of pregnant women	First Trimester	57	19.5
	Second Trimester	134	45.7
	Third Trimester	102	34.8
	Total	293	100.0
Parity	Nullpara	97	33.1
	Primpara	100	34.1
	Multipara	96	32.8
	Total	293	100.0

5.3. Knowledge of substance use during pregnancy by the study participants

From the total respondents 117(39.9%) were know about substance use among which 114(38.9%) heard from their friends and families. From the total respondents 226(77.1%) have poor knowledge and 67(22.9%) have good knowledge about substance use.(Table 3).

Table: 4. Knowledge of pregnant women on substance use during pregnancy in Jimma Town public health facilities, Jimma zone, Oromia region, south west of Ethiopia, 2017.

Variables	Category		Frequency	Percentage (%)
Know about risk of substance use during pregnancy	No		176	60.1
	Yes		117	39.9
Source of information during pregnancy	Newspaper	No	79	67.5
		Yes	38	32.5
	Media	No	82	70
		Yes	35	30
	Health workers	No	80	68.4
		Yes	37	21.6
	Friends/family	No	52	44.4
		Yes	65	55.6
	Others*		6	5
Know about types of substance use during pregnancy	Alcohol	No	26	22.2
		Yes	91	77.8
	Cigarette	No	60	51.3
		Yes	57	48.7
	Khat	No	30	25.6
		Yes	87	74.4
	Others**		9	7.6
Do you know the effect of substance use during pregnancy	No		168	57.3
	Yes		125	42.7
Know about effects of substance use on pregnant women during pregnancy	Abortion	No	82	65.6
		Yes	43	34
	Stillbirth	No	90	72
		Yes	35	28
	Low birth weight	No	80	64
		Yes	45	36
	Others***		6	4.8
Knowledge of substance use during pregnancy	Poor knowledge		226	77.1
	Good knowledge		67	22.9

Note: *= (school, church) **= (shisha, Gaya) ***= (preterm delivery, IUFD)

5.4. Magnitude of Substance use during pregnancy.

The finding of the study showed that, 111 (37.9%) used substance were current users. From those majority of pregnant women, 73 (65.8%) were chewed khat.(Table 5)

Table 5: Current use of substances among pregnant women in Jimma Town public health facilities, 2017.

variables	category	frequency	Percentage (%)
Current use of substance	Yes	111	37.9
	No	182	62.1
Current use of khat	Yes	73	65.8
	No	38	34.2
Current use of Alcohol	Yes	33	29.7
	No	78	70.3
Current use of cigarette	Yes	3	2.7
	No	108	97.3
Others*		2	1.8

Note: *= (shisha, Gaya)

5.5. Pattern of Substance use during pregnancy

The response indicated that 5 (6.8 %) always, 33(45 %) once a week, 35(48%) twice a week of them claimed chewing khat. Regarding the pattern of drinking, 3 (9 %) always, 11(33.3 %) once a week and 19(58%) twice a week of them claimed drinking alcohol. Among the current smokers, 2 (66.7 %) once a week and 1 (33.3%) twice a week and of them claimed smoking cigarette.

5.6. Reasons to use substance during pregnancy

The most reason of pregnancy women to use substances 69 (62.2%) was for socialization.

Table 6: Reasons for substance use among pregnant women in Jimma Town public health facilities, 2017.

variables	category	frequency	Percentage (%)
Mood change	Yes	55	49.5
	No	56	50.5
Pain relief	Yes	21	18.9
	No	90	81.1
Peer pressure	Yes	61	55.0
	No	50	45.0
Socialization	Yes	69	62.2
	No	42	37.8
Others*		5	4.5

NB: *=(spending time, enjoyment)

5.7. Logistic Regression-Bivariate and Multivariate Analysis

The comparison between the profiles of the pregnant women who had substance use and who did not from the bivariate logistic regression analysis revealed that among factors associated with substance use were age of respondents, occupation and education of respondents and her husbands, average monthly income, Gravidity, ANC follow up, Gestational age, parity and family history of substance use and other factors indicated below in the table were selected at P-value < 0.25 for their significance as candidate variable for multivariate analysis. However, in the multivariable logistic regression analysis level after controlling the effect of confounders with P-value less than 0.05 revealed that variables that were independent predictors for substance use among the pregnant women.

The findings of the study showed that education was significantly associated with substance use (AOR=.091 95% CI: (.014, .574)), indicating that women who can write and read were 91% less likely to use substances during pregnancy than can't read and write. Women with othersoccupation were 81% less likely to use substance than their counter parts that

weremerchants (AOR=.188 95% CI:(.036, .974)). As to the relationships between the gestational age and substance use, the study showed that pregnant women in their, second trimester were 3.3 times more likely to use substances than those offirst trimester(AOR= 3.325 95% CI: (1.298, 8.251)).On the other hand, it was indicated that pregnant women with no family history of substance use were found to be 88% less likely to use substances than those who had family history of substance use (AOR= .122 95% CI:(.066, .228)).(Table 5).

Table 7: Bivariate and multivariate logistic regression model on prevalence of substance use and associated factor among pregnant women attending antenatal care in Jimma Town public health facilities, Jimma zone, and Oromia region, south west of Ethiopia, 2017.

Variables	category	Substance use		COR(95% CI)	AOR(95% CI)
		Yes	No		
Age	15-24	40	74	1	1
	25-34	58	89	.829 (.499, 1.378)	1.062 (.375, 3.008)
	= >35	13	19	.790 (.354, 1.378)	1.359(.287, 6.430)
Ethnicity	Oromo	51	78	1	1
	Dawuro	31	47	.9910 (.513,1.615)	1.700 (.400, 7.234)
	Kafa	17	34	1.266 (.640,2.502)	1.434 (.139, 14.782)
	Gurage	9	12	.844 (.332,2.147)	.368(.094, 1.443)
	Others**	3	11	2.321 (.617,8.729)	1.865(.237, 14.710)
Education status of respondents	can't read and write	35	25	1	1*
	Can read and write	11	19	2.418(.981, 5.964)	.091(.014, .574)*
	primary(1-8)	36	66	2.567(1.334, 4.939)	.223(.035, 1.438)
	secondary(9-12)	18	40	3.111(1.460, 6.632)	.486(.095, 2.478)
	College and above	11	32	4.073 (1.730, 9.586)	.519(.119, 2.254)
Education Status of respondent's Husband	can't read and write	12	22	1	1
	Can read and write	10	17	.927 (.778, 3.713)	.554(.088, 3.494)
	primary(1-8)	32	47	.801 (.613, 2.223)	.613 (.132, 2.853)
	secondary(9-12)	20	39	1.063 (1.137, 3.343)	.762(.122, 4.748)
	College and above	28	55	1.071 (1.210, 2.974)	.160(.008, 3.064)

Occupation Status of Respondent	merchant	29	44	1	1
	Government employee	13	38	1.923 (.879, 4.224)	.565(.075, 4.288)
	farming	1	1	.659(.040, 10.960)	.000
	housewife	59	89	.994(.561, 1.763)	2.027(.249, 16.528)
	Others***	9	10	.732(.265, 2.021)	1.732(.101, 29.596)
Occupation Status of Respondent's Partner	merchant	32	70	1	1*
	Government employee	26	54	.949 (.507, 1.778)	.711(.157, 3.214)
	farming	15	25	.762 (.355, 1.637)	1.315(.187, 9.254)
	Private employee	27	20	.339 (.166, .691)	.645(.118, 3.522)
	Others***	3	10	1.524 (.393, 5.915)	.188 (.036, .974)*
Average of HH monthly Income	<1000	63	94	1	1
	1000 - 2000	16	26	1.089(.541, 2.193)	1.399(.244, 8.036)
	2001 - 3000	12	34	1.899(.914, 3.946)	3.021(.400, 22.829)
	3001 - 4000	6	14	1.564 (.571, 4.286)	1.099 (.097, 12.434)
	4000+	14	14	.670(.299, 1.501)	1.251(.113, 13.861)
Gravidity	Primgravida	30	67	1	1
	multigravida	81	115	.636 (.379, 1.065)	.545 (.210, 1.417)
ANC Follow up during pregnancy.	yes	68	94	1	1
	no	13	21	1.168(.920, 3.959)	.554 (.190, 1.621)
Gestational age of respondents	first trimester	18	38	1	1*
	second trimester	51	84	.780 (.403, .981)	3.325 (1.298, 4.251)*
	third trimester	42	60	.677 (.341, 1.343)	1.816 (.909, 3.630)
Parity	Nullpara	30	67	1	
	Prim para	40	60	2.233 (1.452, 3.435)	1.697 (.831 , 7.622)
	multipara	41	55	1.500(1.005, 2.238)	1.218(.135, 10.983)
Family history of substance use	Yes	73	37	1	1*
	No	38	145	7.528(4.418, 8.828)	.122(.066, .228)*

COR=Crude Odd Ratio AOR=Adjusted Odd Ratio *= Significant 1=Reference

= (Tigre, wolaita, Amara) *= (student, daily labour)

6. Discussion

This study revealed that the current prevalence of substance use among pregnant women were 37.9%.The most commonly used substances in descending order were 65.8%Khat chewing, 29.7%Alcohol consuming, 2.7%cigarettes smoking and 1.8% were others.

This finding is high when compare to the study conducted in United States showed that the prevalence of any substance use during pregnancy was 25.8%; the prevalence of cigarette and alcohol use were 18.9% and 10%, respectively(20).Also study conducted in Yemen the prevalence of khat was 40.7% of the women reported chewing khat during pregnancy (27).

This difference might be due to geographically location, cultural difference, and informed about risk of substance use during pregnancy by health care provider.

Also this finding is higher than study conducted in Geneva and Bahir-dar, 36% and 34% respectively. (25, 31).This discrepancy may be due to sample size variation, socio demographic difference, cultural difference, number of variables and knowledge level.

Different studies shows that education, residency, occupation, abortion, preterm delivery, parity and family history were associated with substance use. (20, 23, 25, 31). In this study different factors were included but from those education of respondents, occupation of husband and family history of substance use found to be significantly associated with substance use fromstatistically analysis of multi logistic regression.

In this finding, the study showed that education was significantly associated with substance use (AOR=.091 95% CI: (.014, .574)), indicating that women who can write and read were 91% less likely to use substances during pregnancy than illiterates. Women's husband with others occupation (students, daily labour) were 81% less likely to use substance during pregnancy than their counter parts that were merchants (AOR=.188 95% CI: (.036, .974)).

This finding is consistent with study conducted in Bahir dar town.(31).As to the relationships between the gestational age and substance use, the study showed that pregnant women in their, second trimester were 3.3 times more likely to use substances than those of first trimester (AOR= 3.325 95% CI: (1.298, 8.251)). On the other hand, it was indicated that pregnant women with had no family history of substance use were 88% less likely to use substances than those who had family history of substance use (AOR= .122 95% CI: (.066, .228)).

This finding is contrary with study conducted in United States and Bahir dar town. The possible justification may be due to awareness variation, sample size variation andcultural difference. (20, 31)

Strength

The study subjects were selected using systematic random sampling techniques which avoid selection bias. All public health facilities found in the town were included in the study to obtain representative Information.

Limitations

This study could be since this is a self-reported study participants may not reveal the truth (social desirability) because by default they knew that substance use is a bad habit in our culture. Also lack of related studies on health facilities in Ethiopia specific to this thesis to compare results.

7. Conclusion and recommendations

7.1. Conclusion

The overall current prevalence of substance use during pregnancy in this study was high. Most of the pregnant women engaged to use substance in current pregnancy was due to socialization.

The study also revealed that educational status, family history of substance use, occupational status and gestational age were found to be associated with substance use.

7.2. Recommendations

To alleviate the problem of substance use, all responsible body have to play his/her role.

1. All health workers have to give more attention to care and educate the effects of substance use on pregnant women during ANC follow up.
2. Health care providers have to educate and counsel pregnant women and families about harmfulness of substance use for minimize its prevalence.
3. Jimma Town public health facilities, Jimma Zonal health office and Oromia health biro have to public awareness creation in the media will help to sensitize pregnant women about the risk of substance use and hopefully minimize its prevalence and effects.
4. Researcher are advised to conduct at further study for future.

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Annexes: Questionnaire

Annex I: English Version Questionnaire

Jimma University, Faculty of health science, school of nursing and midwifery.

Questionnaire developed to assess magnitude of substance use and its associated factors among pregnant women attending Antenatal care at Jimma Town public health facilities, Jimma Zone, Oromia regional state, Southwest Ethiopia, 2017.

Individual consent form

Hello, my name is _____. I am working with Ato Lalisa Ayele who is doing a research as partial fulfillment for the requirement of Master's in maternity health nurse. Today I come to visit you at this health facility to collect data on substance use and its associated factors attending Antenatal care at Jimma Town public health facilities. You have been selected for interview by means of systematic sampling techniques selection process.

Purpose of the study

This research is part of a master of maternity health nurse work in the meantime it was assess magnitudes of substance use and its associated factors among pregnant women. Then by giving feed back to the health planners to alter on factor determine substance use and its associated factors.

Procedure and duration

I askedsome questions about substance use and its associated factors. The expected amount of time this interview would take was expected to be 20 minutes and in some case based on the situation, we can arrange more time based on your will.

Are you willing now to participate in the study? Tick one. Agree_____ Do not agree_____

Thank you very much for your cooperation

Interviewer's name _____Signature____Date of interview _____

Supervisor's name _____ Signature_____

If you need additional information you can contact Principal investigator;

Name: Lalisa Ayele Tel. No **0912749407**

Part I. Socio-demographic information

101. How old are you _____ (In years)?

102. What is your marital status?

1. Married 2. Single 3. Widowed 4. Divorced

103. What is your ethnicity group?

1. Oromo 2. Dawuro 3. Kafa 4. Gurage 5. Other (specify).....

104. What is your religion?

1. Orthodox 2. Muslim 3. Protestant 4. Others (Specify).....

105. What is your educational status?

1. Can't read and write 2. Can read and write 3. Primary (1-8) 4. Secondary (9-12)
5. College and above

106. what is your husband`s/partner`s educational status?

1. Can't read and write 2. Can read and write 3. Primary (1-8) 4. Secondary (9-12)
5. College and above

107. What is your occupation?

1. Merchant 2. Government employee 3.Farming
4. House wife 6. Others (Specify).....

108. What is your husband's occupation?

1. Merchant 2. Government employee 3. Farming 4. Daily labor
5. Others (Specify).....

109. What is your average of HH monthly income…….? (In Birr)

Part II: Obstetrics history

201. How many times in total you became pregnant? _____(in number)

202. Is it your pregnant is planned? 1. Yes 2. No

203. Did you follow up ANC during pregnancy? _____

204. What is your gestational age now? _____ (In month)

205. How many times in total you gave birth (parity)? _____ (in number)

Part III: Knowledge questions

301. Do you know about substance use? 1. Yes 2. No

302. If yes que.N0 301, from where did you get those information?

1. New papers 2. Media 3. Health workers

4. Friends/family 5. Others (specify….)

303. If yes Q.301type of substance do you know?

1. Alcohol 2. Cigarette 3. Khat 4. Others (specify…)

304. Do you know any effects during pregnancy related to substance use?

1. Yes 2. No

305. If yes Que. No. 304 what types of effects?

1. Abortion 2. Still birth 3. Low birth weight 4. Others (specify….)

Part IV: Experience question related to substance use

401. Have you use any substance during this pregnancy? 1. Yes 2. No

402. If yes Q.401, what type did you used?

1. Alcohol 2. Cigarette 3. Khat 4. Others (specify……)

403. If you use substance, what is your reason to use?

1. Mood changing 2. Pain/tension relief 3. Peer pressure

4. Socialization 5. Others (specify…)

404. Have you used khat in current pregnancy? 1. Yes 2.No

405. If yes Q. 404, how many times did u chew khat? _____

406. Have you used any kind of alcohol drinks in current pregnancy? 1. Yes 2.No

407. If yes Q.406, how many times did u alcohol consuming? _____

408. Have you used cigarette smoking in current pregnancy? 1. Yes 2.No

409. If yes Q. 408, how many times did u cigarette smoking? _____

410. Do you have a history of substance use in your family? 1. Yes 2. No

Thank you!

Annex II: ቃለ-መጠይቅየአማርኛትርጉም

ቃለ-መጠይቅ

መግቢያ

ጤናይስጥልኝስሜ_____እኔበጅማዩኒቨርሲቲየጤናሳይንስፋካልቲ፣ነርሲ ንግእናየሚድዋይፈሪትምህርትክፍልየማስተርተማሪበሆነውለሊሳአየላበጊዜያዊነትተወክዬነው ይህንጥያቄናመልስይገፍየመጣሁት፡፡ይህጥናትየሚካሄደውእናቶችስለእጽአጠቃቀምናተያያዥ ምክንያቶችጋርየተያያዙጉዳዮችንለመፈተሽነው፡፡ይህጥናትከእናቶችጋርበቀጥታየተያያዘስለ ሆነበጥናቱእንዲሳተፉበእጣከተመረጡትእናቶችአንዱእርሶነዎት፡፡ስለዚህእዚህጥናትላይእንዲ ሳተፉናአስፈላጊውንመረጃእንዲሰጡንበትህትናእንጠይቃለን፡፡ይሁንእንጂማንኛውንምጥያቄአ ለመመለስይችላሉ፡፡እንዲሁምበማንኛውምጊዜጥያቄውንማቋረጥናበጥናቱአለመሳተፍይችላሉ ፡፡ጥያቄናመልሱ 20

ደቂቃይወስዳል፡፡ይህበግልዎየሚሰጡትመልስምበሚስጢርየሚጠበቅስለሆነከጥናቱውጤትጋር በምንምየሚያያዝአይደለም፡፡በመጥይቁለመሳተፍፍቃደኛነዎት?

አዎ……..ይቀጥሉ

አይደለሁም…….ያቁሙ

መጠይቅያደረገውሰውስምናመለያቁጥር ---------- ፊርማ-------

መጠይቅየተደረገበትቀን ---------- 2009ዓ.ም የሱፐርቫይዘርሥም--------

---------- ፊርማ ----------

ለተጨማሪመረጃከፊለጉቁጥር,0912749407መጠየቅይችላሉ

ክፍል፡ ሥነህዝብናማህበራዊመረጃ

101. ዕድሜዎትስንትነው? ----------

102. የጋብቻሁኔታ 1.ያገባ2.ያላገባ3. የትዳርጉዋደኛየሞተባት4. የተፋታ

103. ብሔርዎምንድነው? 1. ኦሮሞ 2.አማራ 3.ትግሬ 4.ጉራጌ 5.ሌላ

104. ሀይማኖትዎምንድነው? 1.ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌላ ……..

105. የትምህርትደረጃዎት? 1. ያልተማሩ 2. ማንበብናመጻፍየምትችል 3.የመጀመሪያደረጃ(1-8)

4.ሁለተኛደረጃ(9-12) 5. ኮሌጅናከዛበላይ

106. የባለቤትዎትምህርትደረጃ?1. ያልተማሩ 2. ማንበብናመጻፍየምትችል 3.የመጀመሪያደረጃ(1-8)

4.ሁለተኛደረጃ(9-12) 5. ኮሌጅናከዛበላይ

107. ስራዎትምንድንነው? 1. ነጋዴ 2. መንግስትተቀጣሪ 3. ግብርና 4. የቤትእመቤት 5. ሌላ ……

108. የባለቤትዎስራምንድንነው?1. ነጋዴ 2. መንግስትተቀጣሪ3. ግብርና 4. የቀንሰራተኛ 5.ሌላ……

109. ወርሃዊገቢዎምንያህልነው? ……. በብር

ክፍል II: የእርግዝናናየዉልደትሁኔታ

201. ስንትጊዚጸንሰውውቃለ?----------

202. አቅደውነውያረገዙት? 1.አዎ 2. አይደለም

203. ባለፈውእርግዝናዎየቅድመወሊድክትትልአድርገዋል? 1.አዎ 2. አይደለም

204. አዎከሆነ(203)፣ስለአደንዛዥእጾችስለሚያመጡትጉዳትተነግሮዎታል? 1.አዎ 2. አይደለም

205. የስንትሳምንትእርጉዝነሽ? ----------

206. ስንትልጅወልደዋል? ----------

ክፍልIII: ስለእጸተጠቃሚነትእውቀት

301. ስለእጸተጠቃሚነትያውቃሉ? 1.አዎ 2. አይደለም

302. ለ301 አዎከሆነ፣የትነውየሰሙት? 1.ከመጽሀፍ/ጋዜጣ 2. ከመገናኛብዙሐን 3.የጤናባለሙያ

4. ጓደኛ/ከቤተሰብ 5.ሌላ

303. ለ301 አዎከሆነ፣ምንአይነትእጸችንያውቃ? 1. አልኮል 2. ሲጋራ 3. ጫት 4. ሌላ----------

304. እነዚህእጾችበእርግዝናላይየሚያመጡትንጉዳትያውቃሉ? 1.አዎ 2. አይደለም

305. ለ304 አዎከሆነ፣ምንምንሊያስከትሉይችላሉ? 1. ውርጃ 2. የሞተልጅመውለድ

3. ዝቅተኛክብደትያለውልጅመውለድ 4. ሌላ

ክፍል IV: ስለእጾችአጠቃቀምያላቸውልምድ

401. በአሁኑስአትእጽይጠቀማሉ? 1.አዎ 2. አይደለም

402. ለ401አዎከሆነ፣ምንአይነትእጽነውየሚጠቀሙት? 1. አልኮል 2. ሲጋራ 3. ጫት 4. ሌላ----

403. ለምድንነውየሚጠቀሙት? 1. ስሜቴንለመቀየር 2. ከህመም/ከጭንቀትነጻለመሆን

3. የጉአደኛግፊት4. ለማህበራዊኑሮ 5.ሌላ ----------

404. ባሁኑእርግዝናጫትይቅማለ? 1.አዎ 2. አይደለም

405. ለጥያ. 404 አዎከሆነ፣ ስንትጊዜይቅማለ? ----------

406. ባሁኑእርግዝናአልኮልእየጠጡነው?1.አዎ 2.አይደለም

407. ለጥያ. 406 አዎከሆነ፣ ስንትጊዜይጠጣለ?----------

408. ባሁኑስአትሲጋራእያጨሱነው?1.አዎ 2. አይደለም

409.ለጥያ. 408አዎከሆነ፣ ስንትጊዜያጨሳለ?----------

410. ከቤተሰብዎውስጥእጽየሚጠቀምአለ?1.አዎ 2. አይደለም

አመሰግናለሁ።።

Annex III

Afan Oromo version participant information sheet and consent form.

Yuuniversitii jimma kollejjiisayinsiifayyaattimummeebarnootatajaajilafayyaahaadhooliiGaaffiinqoraannoo kanas dubaartonniulfata'anilaalamuufgaradhaabbileefayyamagalaa jimma dhufanmeeqaaisaanituuwaantootasuusii/araadata'anittifayyadamajiraa, akkasumasakkafayyadamankanisaaniitaassisuuhoomaaliifaa'aatikanjedhuudha, 2017.

Unkaodeeffannoohirmaatota fi waligalttehirmaatotaibsuseensa

Maqaankoo _____. Yerooamma kana obbolalisaAyyalaabaratadigiriilammaffaayuuniversiitii jimma kanta'anqorannogaggeessaawaanjiraniif raga funaanaafiinjira.kanaafguyyaahar'aa kana garadhabbileefayyaa kana dhufuunkoo raga dhimmawantootaaraada/suusiinamaqabsiisanii fi malootaakkafudhatanisaantaasisuu kana dubartootatajaajilada'uumsaaduraadhabbileefayyaattiargaatanirrattifidaanfunaanufindhufe. Atiqoranno kana keessattiakkahirmaattuufcarraanfilamteetta.

Fayidaaqorannichaa

Qorannokanaanduraandurseeqorataan Kun digriimastersiiKanittiinargatanyoota'eiyyuu, ragaanqoranno kana irraaargamusagantootahedduufayyaahadhoolii fi daa'immanfooyyesuunbu'aaguddaaqaba.

Qorannoo kana irrattihirmaachuuffedhiinmurteesuu.

Kannenarmaanolittiibsamaanhundasiifdubbiseenjira. Gaaffiinkeenyaakunisdaqiiqa 20 kanhincaalleedha. Kanaafbu'aaqoranno kana hubatteewaanjirtuuffedhaakeetiingaaffiisigaaffanuufdeebiinuufkennuuffedhaqabdaa?

Eeyyee_____Lakkii_____

Maqaa fi malaattodaatafuunane: _____guyyaa _____

Maqaa fi malaatto supervisor godhee_____guyyaa: _____

Yaadadabaalatayoobarbadaniibilbilakanaanargachunidandeessu: 0912749407

Kutaa 1ffaa. Gaaffileedhimmaseenaa

101. Umuriinkeewaggaameeqaa? _____.

102. Halligaa'ilaakeetiimaaliifaakkataa?

1. Heerumeera 2. Hinheerumne 3. Abbaamanaanarraadu'e

4. Gaa'eladiigne

103. Qomoonkeemaalii?

1. Oromoo 2. Amaaraa 3.Tigiree 4. Guragee 5. Kanbiraa(ibsi---)

104. Amamtaankeemaalii?

1. Ortoodoksii 2. Muuslimaa 3. Pirootestaantii 4. kanbiraa(ibsi---

105. Sadarkaabarumsaakeehangam?

1. Barressu fi dubbisuhindanda'u

2. Barressu fi dubbisunandanda'a

3. kutaa 1-8 4. Kutaa 9-12 5. kolleejjiifiisaaoli

106. Sadarkaabarumsaaabbamanaakeetiihangamii?

1. Barressu fi dubbisuhindanda'u

2. Barressu fi dubbisunandanda'a

3. kutaa 1-8 4. Kutaa 9-12 5. kolleejjii fi isaaoli

107. Hojiinkeeyerooaammaamalii?

1. Daldaltuudha 2. Hojjattumootummaa 3. Qoteebulaa

4. Haadhamanaa 5. Kanbiraaibsi-----

108. Hojjinabbamanaakeetiihoomaalii?

1. Daldalaadha 2. Hojjattamootummaa 3. Qoteebulaa

4. Dafqaanbulaa 5. Kanbiraaibsi-----

109. Galiinji'aattiargamuBirrittihangamta'aa?_____

Kutaa 2ffaa: Gaaffiiseenaadhimmada'uumsawajjiinwalqabate.

201. Hangaayoonattiyeroomeeqaaulfoftee? _____

202. Ulfikeekekankarooruman/ ittumayaaddeekanulfoofteedhaa?

1. Eeyyee 2. Lakki

203. Tajaajilada'uumsaduraayerooulfake kana ilaalamaturtee? 1. Eeyyee 2. Lakki

204. Ulfikeekuniji'ameeqaata'aa? _____

205. Ijolleemeeqaadeessee? _____

Kutaa 3ffaa: Gaaffiibeekumsailaallatu

301. Wantootaaraada/suusiinamaqabsiisanbeektaa? 1. Eeyyee 2. Lakki

302. Yoogaaffailakk. 301 irrajirueeyyejette,eessaadhageessee?

1. Gaazexaairraa 2. Midiyaaleegaraagaraairraa 3. Ogeessafayyaarraa

4. Hiriyaa/maatiiirraa 5. Kanbiraaibsi------

303. Yoogaaffilakk. 301eeyyeejette, maaliifa'aabeektaa?

1. Alkoolii
2. Sigaaraa
3. Caatii
4. Kanbiraaibsi……

304. Waantootnisuusiinamaqabsiisankuniulfairrattimiidhaanifidaa?

1. Eeyyee 2. lakki

305. Yoogaaffailakk. 308 irrajirueeyyejette,miidhamaaliifa'aafidaa?

1. torbaan 28' n duraulfinibaha

2. torbaan 28'n boodadaa'imnnidu'aandhalaachuu

3. ulfaatinnimucaaosoohingahiindhalata/tti(<2500g)

4. kanbiraaibsi----------

Kutaa 4ffaa: gaaffiiraawwii/gochailaallatu

401. Wantootasuusii/araadanamaqabsiisaniulfa kana irrattifayyadamaajirtaa?

402. Yoogaaffilakk. 401eeyyeejette, isakamittifayyadamaajirtaa?

1. DhugaatiAlkoolii
2. Sigaaraaxuuxuu
3. caatiiqamaa'u
4. Kanbiraaibsi……

403. Yoogaaffilakk. 401eeyyeejette, akkafayyadamtukansitaasisemaaliidhaa?

1. Muudiiwaanjijjiruuf2. Dhukkubbiwaanhir'isuuf

3. waanhiriyaankoofayyadamaniif 4. Sababaamaantatiif

5. Kanbiraaibsi ----

404. Ulfa kana irratticaaatiifayyadamaajirtaa? 1. eeyyee 2. lakki

405. Yoo gaf.lakk.404 eeyyeejettehammamhammaminqaamtaa?_____

406. Ulfa kana irrattidhugaatialkooliifayyadamaajirtaa? 1. eeyyee2. lakki

407. Yoo gaf.lakk.406 eeyyeejettehammamhammamindhugdaa?_____

408. Ulfa kana irrattisigaaraaxuuxaajirtaa?? 1. eeyyee 2. lakki

409. Yoo gaf.lakk.406 eeyyeejettehammamhammamindhugdaa?_____

410. Maatiinkeewantootasuusii/araadaqabuttinifayyadamuu?

1. Eeyyee 2. Lakki

Galatooma!

Assurance of principal investigator

The undersigned agree to accept responsibility for the scientific ethical& technical conduct of the research thesis and for provision of required progress reports as per term and condition of faculty of health sciences in effect at a time of grant is forwarded as a result of this application.

Name of student: Lalisa Ayele (BSc)

Signature_____ Date_____

Approval of advisors

1. Mr. Fekadu Yadassa (BSc. MSc, Asst.professor, PhD fellow)

   Signature_____ Date _____

2. Ms. Dagmawit Birhanu (BSc.MSc)

   Signature_____ Date _____

Approval of internal examiner

Mr. Temamen Tesfaye

Signature_____ Date _____