

Prevalence of Unplanned Pregnancy and Factor Among Pregnant Women, Ethiopia 2018 GC

Asnakech Sisay¹, Nitsubirhan Asres², Sofonias Tesfaye¹

¹Department of Midwifery, Institute of Medicine and Health Science, Debre Birhan University, Debre Birhan City, Ethiopia

²Department of Nursing, School of Nursing, Kotebe Metropolitan University, Addis Ababa City, Ethiopia

Email address:

abkeya5@gmail.com (A. Sisay)

To cite this article:

Asnakech Sisay, Nitsubirhan Asres, Sofonias Tesfaye. Prevalence of Unplanned Pregnancy and Factor Among Pregnant Women, Ethiopia 2018 GC. *Clinical Medicine Research*. Vol. 8, No. 2, 2019, pp. 39-46. doi: 10.11648/j.cmcr.20190802.12

Received: October 19, 2018; **Accepted:** June 12, 2019; **Published:** June 29, 2019

Abstract: Unplanned pregnancy is a public health concern in both developing and developed world. It predisposes women to maternal deaths and illness mainly through unsafe abortion and poor maternity care, and also it causes adverse social and health outcome for mother, children and family as whole. Unplanned pregnancy can have serious health, economic, psychological and social consequence for women, their children and families. The objectives of this study are to assess the prevalence and associated factors of unplanned pregnancy among pregnant mothers in Arerti town. Community based cross sectional study was done from March 18 – March 22, 2018 GC. Out of 334 pregnant women in Arerti town, data were collected from 327(97.9%) pregnant women. The prevalence of unplanned pregnancy was 97(29.9%). Use of family planning methods [AOR= 3.845(2.023-7.307)] and educational status of pregnant women [AOR=12.472(1.571-99.011)] were factors significantly associated with unplanned pregnancy. According to this study over one third of pregnant women had unplanned pregnancy. We recommend that there is an apparent need to provide information and counseling about each contraceptive methods by health extension and other health service worker in order to make informed choice and correct method use and strengthening family planning methods among client in need of service and encourage women's education.

Keywords: Unplanned Pregnancy, Family Planning, Antenatal Care and Contraceptive

1. Introduction

Background

Unplanned pregnancy is a public health problem in both developing and developed world, because of it cause adverse social and health outcome for mother, children and family as whole [1]. Unplanned pregnancy can have serious health, economic, psychological and social consequence for women, their children and families. In order to achieve reducing child mortality and improving maternal health; the incidence of unplanned pregnancy and its consequences must be dramatically reduced [2].

Unplanned pregnancy can lead to unwanted birth or abortion which could be unsafe; it might affect the mothers, child and the society at large and different circumstance. For instance they may be un safe abortion, delayed or no prenatal care, poor maternal health reduce mother child relationship quality, physical abuse and violence against women, poor

developmental outcomes for children, increase risk of low birth weight as well as increased morbidity and mortality [3].

Globally in 2012 out of 213 million pregnancy, 85 million were unplanned, in which 50% ended with abortion, 13 miscarriage and 38% unplanned birth [4]. In 2008 out of 210 million pregnancy, 80 million were unintended, in which 21.6 million were completed by un safe abortion causing the death of 47000 women, this indicate that the incidence of 1 in 10 million pregnancy end in unsafe abortion. Generally the number of abortion increase from 19.7 million in 2003 to 21.6 million in 2008 which occurs almost in developing country [5].

The rate of unintended pregnancy decline from 69 per 1000 women, (15-44) in 1995 to 55 in 2008, 20% drop that is reflective of the worldwide trend towards increase the use of contraception. But it is still public health problem affecting significant number women and child life [6].

Most of (95%) unsafe abortion occurs in developing countries. Millions more suffer long term injuries from life

threatening complication. In many poor countries treatment of this complication consume up to half of hospital budget for obstetrics and gynecology [7]. For instance, according to the study by WHO in 2008, in Africa about 5.5 million unsafe abortion were performed each year and 3600 of them died. In the same year, in Ethiopia the study made by Guttmacher institute, showed that 101 unwanted pregnancies occurred per 1000 women aged 15- 44, and 42% of all pregnancies were unintended; 382,500 induced abortions performed in which the annual rate was 23 abortion per 1000 women. Regarding the capital city Addis Ababa, the situation was more severe than the national level which was 49 per 1000 on average. Those women had a chance to develop complication, like acute trauma, organ failure, infection and future reproductive problems due to unsafe abortion [8].

Unmarried women and teenagers face up, since it is ignominy on the societies they become obligated to perform clandestine unsafe abortion which causes, physical abuse, thrown out of home, exposed to prostitution, infected with HIV or unplanned child bearing, morbidity and mortality [9].

2. Methodology

2.1. Study Area

The study was conducted on pregnant women in Arerti town, Minjar shenkora woreda, north shewa, Amhara region, Ethiopia. Minjar is located in north shewa zone, is one of the 105 woredas (a district managed by a local government) in the Amhara region of Ethiopia. It is located about 133km from Addis Abeba, the capital city of Ethiopia.

Minjar shenkora woreda has an estimated population of 161,352 according to 2010 EC. census and an area of 229,463 square kilometer with 90% living in rural settings [31]. Arerti, the main city of minjar shenkora woreda had one kebele but recently it divided in to two kebeles. Among the total population in both kebeles 496 are pregnant women. In Arerti town there is one hospital and one health center which makes the health coverage 100% and 70% respectively according to Federal Ministry of Health hospital or health center to number of population proportion.

2.2. Study Period

The study was conducted from February 15-April 15, 2018 GC.

2.3. Study Design

Community based cross sectional study was conducted to assess the prevalence of unplanned pregnancy and associated factor among pregnant women in Areri town.

2.4. Source Population

All Pregnant women who were lives Arerti town.

2.5. Study Population

All Pregnant women in selected ketenas were included.

2.6. Eligibility Criteria

2.6.1. Inclusion Criteria's

-All currently pregnant women who live in Arerti town were included.

2.6.2. Exclusion Criteria's

- Pregnant mothers who are critically ill.

2.7. Sampling Technique and Procedure

2.7.1. Sample Size Determination

The study sample size was determined by statistical calculation. The estimation of population proportion, p , where p is the proportion of prevalence of unplanned pregnancy and its associated factors for pregnant women, $p=0.34$ [32], as this value gives sample size sufficiently large to guarantee an accurate prediction, at 95% confidence interval and 5% marginal error. The following formula will be used.

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

where

n =the sample size required.

P =prevalence of unplanned pregnancies among Pregnant Women= 34%.

d =the margin of sampling error tolerated mostly 5% (0.05)

Z =standard normal variable at 95% confidence Level (1.96)

$$n = \frac{(1.96)^2 0.34 (1 - 0.34)}{(0.05)^2} = 345$$

Since our source population (496) to be less than 10000 we use correction formula as follows.

$N_f = n / (1 + n/N) = 203$

Where N_f = final sample size

N =source population which is 496 pregnant Women in Arerti town

$n = N_f \times d$

$n = 203 \times 1.5 = 304$

Finally by adding the non-response rate 10% of 345 the final sample size will be =334

2.7.2. Sampling Technique and Procedure

Arerti town has two kebeles which branches in to six Ketenas since the populations who live in these Ketenas have no significance difference (almost the same) in life style and living standards. There for we consider cluster sampling as a sampling technique by taking those Ketenas as a cluster. The total pregnant women in the six Ketenas are 496 which main that Ketena one 78, Ketena two 81, Ketena three 88, Ketena four 79, Ketena five 84 and Ketena six 86 with average 82 pregnant women in each Ketena. In order to estimate the expected number of clusters, the calculated sample size was divided by the average number of pregnant women (82) in each ketena then four clusters were selected randomly.

2.8. Study Variables

2.8.1. Dependent Variable

-Unplanned pregnancy

2.8.2. Independent Variables

- Age
- Marital status
- Parity of mother
- Educational level
- Occupation
- Use of FP
- Information about FP
- Decision maker to use FP

2.9. Operational Definitions

- i. Unintended pregnancy: is a pregnancy, which is either unwanted or mistimed.
- ii. Unwanted pregnancy: a pregnancy that has occurred to the women who were not wishing to become pregnancy neither at the time of conception nor in the future.
- iii. Mistimed pregnancy: a pregnancy, which has occurred without the wish of the women at the specific time of occurrence of the pregnancy, but she has a desire to be pregnant and have a child or children sometime in the future.
- iv. Intended pregnancy: is pregnancy that occurred to women who wanted a baby at the time she became pregnant or sooner or were in different about conserving.
- v. Unmet need for family planning: the percentage of married women or in union who wants to space their next birth at least two years or stop child bearing entirely but are not using contraception.
- vi. Unplanned pregnancy: is pregnancy which was not planned, but after conception it may be wanted or unwanted.

3. Results

3.1. Socio Demographic Characteristics

Out of 334 pregnant women who lives in Arerti town, a total of 327 pregnant women interviewed and responded to the questionnaire mean that 97.9% response rate. 242 (74%) lives in urban. Concerning to age majority 105(32.1%) of women are belongs 27-31 and 91(27.8%) found in 22-26 age group, 61(18.7%) are found between 32-36 and 54(16.5%), 16(4.9%) was found 17-21 and 37-41 age group respectively.

Regarding to marital status 298(91%) were married followed by 20(6.1%) unmarried, the rest 8(2.4%) and 1(0.3%) were divorced and widowed respectively. Among 327 pregnant women 110(33.6%) are both equally illiterate and grade one up to grade four and 69(21.1%), 24(7.3%) and 14(4.3%) were grade five up to grade eight, high level education and grade nine up to grade Twelve respectively. In relation to ethnicity, Amhara accounts for the largest proportion which were 279(85.3%) while Oromo, Gurage and Tigray accounts for 27(8.3%), 19(5.8%) and 2(0.6%) respectively. With regard to religion Orthodox were the dominant one by accounting 268(82%) followed Protestant which accounts 35(10%) and Muslim and catholic accounts 23(7%) and 1(0.3%) respectively.

3.2. Information About Family Planning Services and Service Utilization

Among 327 pregnant women almost all have information about family planning services which accounts 323(98.8%) but the rest 4(1.2%) have no information about family planning services. Those pregnant women who had information about family planning services, majority of them got information from health professional which accounts 144(44%) followed by from neighborhood, mass media, school and reading from books which accounts 122(37.3%), 34(10.4%), 25(7.6%) and 2(0.6%) respectively.

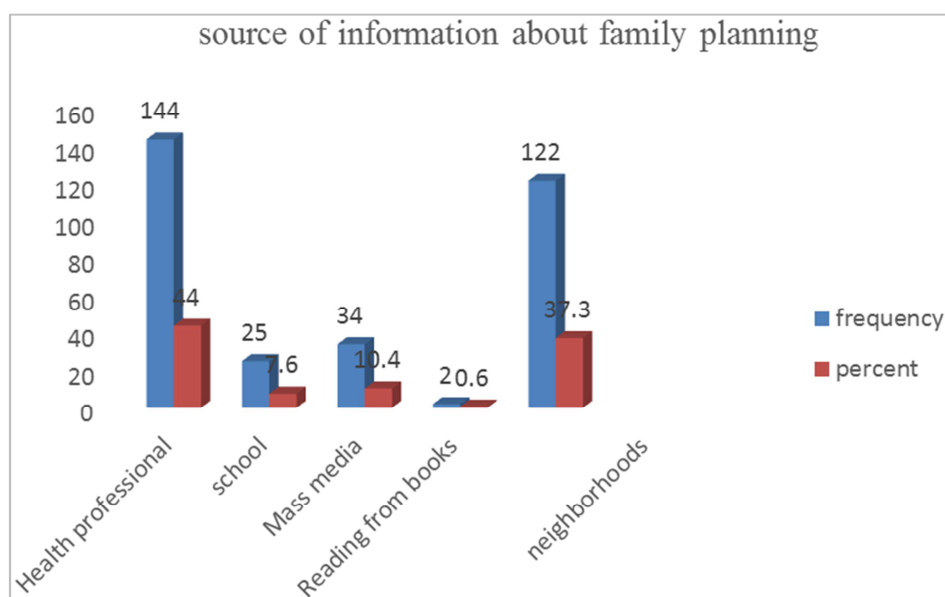


Figure 1. Source of information about family planning.

Regarding to who make decision on family planning majority of them decided by their husbands which accounts 280(85.6%) and 15(4.6%) of them decided by their Owen, the other family member were decided 32(9.8%).

Among 323(98.8%) of pregnant women 280(85.6%) utilize family planning services. The type of family planning methods that have been practiced by the pregnant women were pill, depoprovera, IUCD, and implants. From 280(85.6%) pregnant women 80(28.6%) were use pill and the rest 200(71.4%) were not use pill as a contraceptive methods, and from 280(85.6%) pregnant women 217(77.5%) were use depoprovera and the other 63(22.5%) were not use depoprovera and from 280(85.6%) pregnant women 6(2.1%) were use IUCD and majority of them which was 274(97.9%) were not use IUCD and from 280(85.6%) pregnant women 75(26.8%) were use implants and the other 205(73.2%) were not use implants as a contraceptive methods.

Among 323(98.8%) pregnant women 47(14.4%) not utilized family planning services at all. Majority of them 16(34.0%) of the pregnant women the reason not used family planning were fear of side effects followed by fear of religion, lack of knowledge both need of child birth and fear of husband, and lack of family planning services each accounts 13(27.7%), 10(21.3%), 3(6.4%) and 2(4.3%) respectively.

3.3. Prevalence of Unplanned Pregnancy

According to this study the prevalence of unplanned pregnancy was 97(29.7%), of them 36(37.1%) the reason for unplanned were forgot time of contraceptive use followed by lack of family planning services, failure of family planning methods, husband preference and rape which accounts 23(23.7%), 20(20.6%), 12(12.4%) and 6(6.2%) respectively.

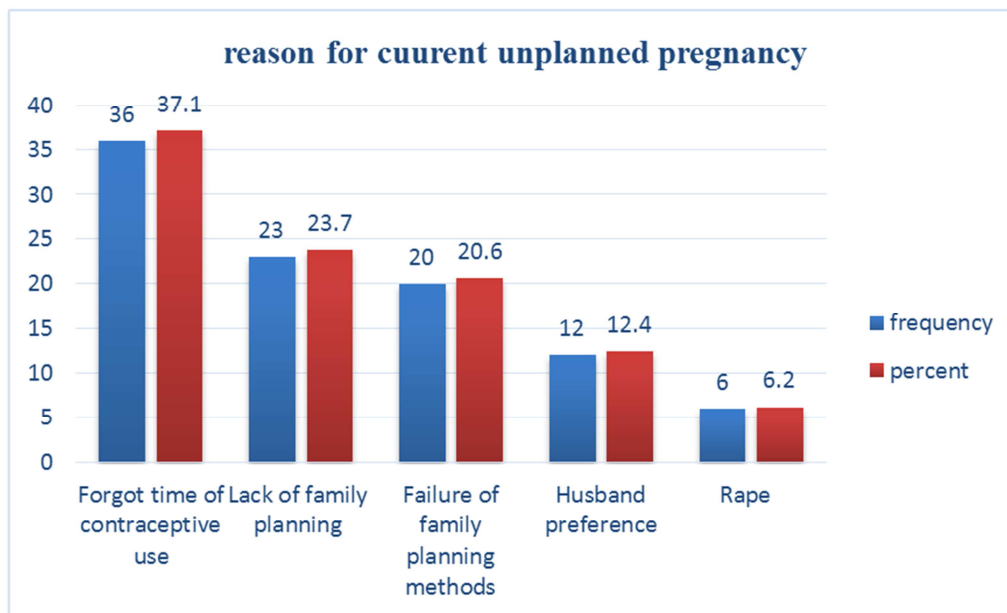


Figure 2. Reason for unplanned pregnancy.

Among 206(63.0%) pregnant women 141(68.4%) had not history of unplanned pregnancy but the rest 65(31.6%) had history of unplanned pregnancy, from those 60(92.3%) had one unplanned pregnancy, the other 4(6.2%) and 1(1.5%) had two and three unplanned pregnancy respectively. The reason for previously unplanned were forgot time of contraceptive use which accounts 43.1%, followed by lack of family planning services and failure of contraceptive methods, 38.5% and 3.7% respectively. The reason for unplanned pregnancy were due to forgot time of contraceptive which was 28(43.1%), lack of family planning service and failure of contraceptives 25(38.5%) and 12(18.5%) respectively. From 65(31.6%) pregnant women 40(61.6%) previously had unplanned due to contraceptive methods failure. From the contraceptive methods depoprovera 19(47.5%) was the predominant, followed by pill, implants and IUCD,

17(42.5%), 3(7.5%) and 1(2.5%) respectively.

3.4. Bivariate and Multivariate Analysis Result of Dependent Variable (Unplanned Pregnancy) with Independent Variables

Bivariate and multivariate logistic regression analyses were done to analyze factors associated with unplanned pregnancy. On the bivariate logistic regression analysis: residence, religion, educational status, occupation, income, information about family planning, source of information about family planning, decision maker about family planning, family planning practice, reason not to use family planning and pregnancy before pregnancy were associated with unplanned pregnancy at $P < 0.2$.

Table 1. Analysis result of dependent variable (unplanned pregnancy) with independent variables.

NO	Variable	Category	unplanned Current pregnancy		COR	P-Value	
			NO (%)	YES (%)			
1	Residence	Urban	180(74.1%)	63(25.9%)	1	0.013	
		Rural	50(59.5%)	34(40.5%)	1.943(1.153-3.273)		
2	Religion	Orthodox	195(72.8%)	73(27.2%)	1	0.068(0.489-2.33)	
		Protestant	25(71.4%)	10(28.6%)			
		Catholic	0(0%)	1(100%)			
		Muslim	10(43.5%)	13(56.5%)	3.473(1.459-8.65)		
4	Educational statuses	Illiterate	62(56.4%)	48(43.6%)	17.8(2.32-136.5)	0.049	
		Grade1-4	82(74.5%)	28(25.5%)	7.854(1.014-6.858)	0.081	
		Grade5-8	54(78.3%)	15(21.7%)	6.389(0.796-51.2)	0.029	
		Grade9-12	9(64.3%)	5(35.7%)	12.778(1.305-125.06)		
		Higher education	23(95.8%)	1(4.2%)	1		
5	Occupation	House wife	95(68.3%)	44(31.7%)	1	0.037	
		Governmental employment	28(87.5%)	4(12.5%)	0.308(0.102-0.933)		0.233
		Trader	49(76.6%)	15(23.4%)	0.661(0.335-1.304)		0.262
		Farmer	43(60.6%)	28(39.4%)	1.406(0.775-2.51)		0.776
		Self-employment	15(71.4%)	6(28.6%)	0.864(0.314-2.376)		
6	Income	<1000	104(64.2%)	50(35.8%)	1	0.077	
		1001-2000	74(74.7%)	25(25.3%)	0.606(0.348-1.056)		0.096
		2001-3000	32(78.0%)	9(22.0%)	0.504(0.225-1.129)		0.122
		3001-4000	12(85.7%)	2(14.3%)	0.299(0.265-1.382)		0.569
		>4001	8(72.7%)	3(27.3%)	0.672(0.172-2.634)		
7	Information about FP	Yes	229(70.9%)	94(29.1%)	1	0.087	
		NO	1(25.0%)	3(75.0%)	0.309(0.75-71.15)		
		Health professional	101(71.1%)	41(28.9%)	1		
8	Source of information about FP	School	15(65.2%)	8(34.8%)	1.314(0.518-3.335)	0.566	
		Mass media	27(79.4%)	7(20.6%)	0.639(0.258-1.582)	0.333	
		Reading books	2(100%)	0(0%)		0.9	
		Neighbor	84(68.9%)	38(31.1%)	1.114(0.657-1.889)	0.688	
9	Who make a decision on FP	Husband	205(73.0%)	76(27.0%)	1	0.033	
		Wife	7(46.7%)	8(53.3%)	3.083(1.081-8.79)		0.86
		Family	18(58.1%)	13(41.9%)	1.948(0.911-4.167)		
10	Have you ever practice FP	Yes	210(74.7%)	71(25.3%)	1	0.00	
		NO	20(43.5%)	26(56.5%)	3.845(2.023-7.307)		
11	Pills	Yes	51(63.8%)	29(36.2%)	1	0.008	
		No	159(79.1%)	42(20.9%)	0.465(0.263-0.820)		
12	Dipo	Yes	164(75.2%)	54(24.8%)	1	0.722	
		No	46(73.0%)	17(27.0)	1.122(0.594-2.119)		
13	IUCD	Yes	5(83.3%)	1(16.7%)	1	0.142	
		No	205(74.5%)	70(25.5%)	1.707(0.196-14.865)		
14	Implant	Yes	62(82.7%)	13(17.3%)	1	0.068	
		No	148(71.8%)	58(28.2%)	1.869(0.95-3.655)		
		Lack of knowledge	2(22.2%)	7(77.8%)	1		
		Need of child	2(66.7%)	1(33.3%)	0.143(0.008-2.517)		
15	Reason not to use FP	Fear of religion	6(46.2%)	7(53.8%)	0.333(0.049-2.257)	0.260	
		Fear of side effect	7(43.8%)	9(56.3%)	0.367(0.057-2.351)	0.290	
		Fear of husband	2(66.7%)	1(33.3%)	0.143(0.008-2.517)	0.184	
		Lack of FP	1(50.0%)	1(50.0%)	0.286(0.012-6.914)	0.441	
16	Pregnancy before current pregnancy	Yes	138(66.7%)	69(33.3%)	1	0.058	
		No	92(76.7%)	28(23.3%)	0.609(0.365-1.016)		
17	How money	1	60(72.7%)	24(27.3%)	1	0.113	
		>2	74(62.2%)	45(37.8%)	1.622(0.892-2.948)		

In the multivariate model of logistic regression, variables which had significant level of $p < 0.2$ were entered in to the model. The Adjusted OR (AOR) findings showed the significant of the multivariable with the dependent variable.

From those variables unplanned pregnancy were significantly associated with educational status and use of family planning methods of the pregnant women.

Regarding to educational status of pregnant women unplanned pregnancy had significantly associated with illiterate pregnant women compared to higher educated pregnant.

Concerning to use of family planning methods pregnant women who used family planning methods were significantly associated with unplanned pregnancy as compared to pregnant women who didn't use family planning methods.

Regarding to educational status of pregnant women illiterate pregnant women 12 times more likely associated with unplanned pregnancy compared to higher educated pregnant women [AOR=12.472 (1.571-99.011)]. pregnant women who educated from grade 9 up to grade 12 were more likely significantly associated with unplanned pregnancy compared

to higher educated pregnant women [AOR=11.030 (1.090-111.6)]. Pregnant women who educated from grade 1 up to grade 4 were more likely associated with unplanned pregnancy compared to higher educated pregnant women [AOR=5.838 (0.740-46.074)]. Pregnant women who educated from grade 5 up to grade 8 were more likely significantly associated with unplanned pregnancy compared to higher educated pregnant women [AOR=5.038 (0.616-41.20)].

Concerning to use of family planning methods pregnant women who had not use contraceptive methods more significantly associated with unplanned pregnancy compared to pregnant women who had use contraceptive methods [AOR=2.686 (1.204-5.996)]. But residence, religion, information about family planning and decision maker on family planning, were not associated with unplanned pregnancy with p value <0.05.

Table 2. Multivariate analysis result of dependent variable (unplanned pregnancy) with independent variables.

NO	Variable		Un planned current pregnancy		COR	AOR	P-VALUE
			No	Yes			
1	Residence	Urban	50(74.1%)	63(25.9%)	1.943(1.153-3.273)	1.594(0.890-2.854)	0.117
		Rural	50(59.5%)	34(40.5%)			
		Orthodox	195(72.8%)	73(27.2%)			
2	Religion	Protestant	25(71.4%)	10(28.6%)	1.068(0.489-2.333)	1.143(0.478-2.735)	0.764
		Catholic	0	1%(100%)			
		Muslim	10(43.5%)	13(56.5%)			
		Ill-treat	62(56.4%)	48(43.6%)			
3	Educational level	G1-G4	82(74.51%)	28(25.5%)	7.85(1.014-6.858)	5.838(0.740-46.074)	0.094
		G5-G8	54(78.35%)	15(21.75%)			
		G9-G12	9(64.3%)	5(35.7%)			
		Higher level	23(95.8%)	1(4.2%)			
		Yes	229(70.9%)	94(29.5%)			
4	Information about FP	No	1(25.0%)	3(75.0%)	7.309(0.75-71.15)	1.766(1.3622-906%)	0.664
		Husband	205(73%)	76(27.0%)			
5	Who make decision on FP	Wife	7(46.7%)	8(53.3%)	3.083(1.081-8.79)	0.496(0.205-1.201)	0.120
		Family	18(58.1%)	13(41.9%)			
		Yes	210(74.7%)	71(25.3%)			
6	Use of FP	No	20(43.5%)	26(56.5%)	3.845(2.023-7.307)	2.686(1.204-5.996)	0.016

AOR= Adjusted Odds Ratio

COR= Crude Odds Ratio

4. Discussion

This study was designed to assess the prevalence of unplanned pregnancy and its associated factors, among pregnant women who live in Arerti town.

Unplanned pregnancy is a public health problem that predispose women to maternal death and illness mainly through unsafe abortions and poor maternity care.

In this study unplanned pregnancy was 29.9% among the study participants. This findings is in agreements with the findings from other studies in Ethiopia [36] and Kenya [18] but it is lower than the other studies that were conducted in Jimma 35% [37] and Hosana 34% [19], this might be due to the increased availability and accessibility of maternal health services, including access to modern family planning with time. More over this finding were much lower than the findings of studies conducted in Tanzania 45.9% [38] and Nepal 41.1% [35]. This might be due to the socio-cultural and health coverage difference among the countries.

In contrast this study also slightly higher in proportion to the study conducted in Kersa eastern Ethiopia in 2010 (27.9%) [39] and facility based study done in Bahir Dar 26% [34]. This may be due to a difference in socio-demographic characteristics and it was done one facility.

In the multivariate analysis, educational status and use of contraceptives methods of pregnant women were found to have statistically significant on unplanned pregnancy.

Regarding to educational status of pregnant women, several studies showed that as the educational level increases unplanned pregnancy decreases and reduces the chance of discontinuity of contraceptives [35].

This study showed that educational status of the pregnant women was found to be significantly associated with unplanned pregnancy. The risk of experiencing unplanned pregnancy was higher in women who are unable to read and write [AOR=12.472(1.571-99.011)] compared to higher educated women. Even little advance in education improves women's decision making power and leading to advance of unplanned pregnancy, hence education has a pervasive impact on a women pregnancy intension since it empowers to manage their family size and intensively develop self-feelings and their planning experience's reduce the chance of un intended pregnancy with the same study conducted in hawassa, southern Ethiopia showed the same result.

Regarding to their use of contraceptives methods pregnant women who used contraceptives more likely associated with unplanned pregnancy compared to pregnant women who didn't use contraceptive methods [AOR=12.472(1.571-99.011)]. This findings is also consistent with findings in Ethiopia [40] and other countries [35]. Similar to the study done by Guttmacher institute in 2010 which is the proportion of women using modern contraceptives in the developing world as a whole greatly increased and reduced the experiences of unplanned pregnancy.

The present finding is in line with the study done in West

Wollega (OR 3.76; 95% CI; 2.37, 5.96) [35]. Our result supports the hypothesis that if a women higher use of contraceptives methods she is more likely to be aware of the benefits of those method which in turn will motivate her to use the methods and less likely to have unplanned pregnancy. The similar result was found in Ecuador as well [41].

Studies conducted in developing countries indicate that women's age, level of education, number of children, social and economic deprivation are the major determinant of unplanned pregnancy [42]. While our study shows that unplanned pregnancy have strong association with educational status and use of family planning methods.

Limitation of the study

- a) The respondents were not volunteer to answer their approximate monthly income these may affect our result.
- b) Lack of personal computer.
- c) Lack of internet access for sending and receiving comments to our advisor.

5. Conclusion

The present study revealed that 29.9% pregnant women in arerti town had unplanned pregnancy. This indicates unplanned pregnancy is one of the major reproductive health problem in the study area.

The result of this study showed that some factors were interwoven to affect the occurrence of the event including educational status and use of family planning methods which showed significant associated with unplanned pregnancy.

6. Recommendation

Based on the finding of this study, the following recommendation are given.

Address the issue of unplanned pregnancy by designing strategies in policy documents, strategic plan including health sector development.

Provide information and counselling about each contraceptive methods in order to make informed choice and correct use and strengthening family planning method among client in need of service.

Declaration

Ethical Considerations

Ethical clearance and permission was obtained from Debre Berhan University, institute of medicine and health science ethical review committee. The nature of the study participants to obtain there oral informed consent prior to the study and data was kept confidential. Oral informed consent was obtained from each respondent before interview. The information was not be used for other researchers and never be exposed to third person without their consent.

Acknowledgements

First of all we would like to praise almighty God who gave

us the courage and power to develop this research proposal.

We are also very great full to express our deepest thanks to Debre Berhan University and department of midwifery for providing us such an opportunity.

Appendix

Appendix: English Version of Participant Information and Consent Form

Informed consent

Good morning/afternoon, we are students of Debreberhan university health science college. Now we are going to collect information regarding the prevalence of unplanned pregnancy and associated factor among pregnant women in this Community. We assure you that the information that you are going to give will be kept in secrete. Therefore, you are free to respond or not to respond the questions. Your support and willingness in responding the questions will be very important for the success of this study, So that we need your cooperation to answer the questions that we are going to ask. Are you willing to answer? yes _____ no _____ Thank you for your cooperation

Data Collection Tool

The general purpose of this study is to assess the magnitude of unplanned pregnancy and associated factors among pregnant mothers and to provide base line data for responsible authorities and for extensive study to develop appropriate strategy that meets clients need.

Instrution:

1. The client name will not be important and keep the rights of respondent if they don't want to respond and to terminate at any time during interview.

2. Circle the code number given parallel to the answer you choose

3. For open ended question items, please write the direct client response in space provided.

Data Collecting Date: - Day ----- Month ----- Year -----

References

- [1] Eggleston, Elizabeth, and Amy unintended pregnancy and low birth weight in x Ecuador America: American journal of public health, 2001 p. 808-810.
- [2] Susheela singh, Deirder wulf, Rubina Hussain, Akinrinola Bankable, Gilda sedgh. Abortion worldwide: A Decade of UN even progress (Report) 2009. Alan Guttmacher institute.
- [3] The global epidemic of unintended pregnancies, in European society of contraception and Reproductive Health international federation of gynecology and obstetrics. 2011. p. 53.
- [4] Sedgh, G. S. Singh, and Hussain, intended and unintended pregnancies worldwide in 2012 and Recent Trends. Population council, 2014.
- [5] WHO, Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2008. 2011. 6th. p. 67.

- [6] Amin F. Howden. Pemman NA Risk factors of unplanned pregnancies in group of Iranian and news land women, *European Journal of scientific Research* (2009) 26 (1): 108-121.
- [7] WHO global and regional estimates of the incidence of unsafe abortion and associated mortality in 2007. 5th edition.
- [8] Guttmacher, facts on unintended pregnancy and abortion in Ethiopia maiden Lane, 2010: p. 2.
- [9] Worku. S and M. Fantahun, unintended pregnancy and induced abortion in a town with accessible family planning services: The case of Harar in eastern Ethiopia *Ethio P. J. Health Dev*, 2006. 20 (2).
- [10] Santelli J rochat R Hatfield-Timajchik Gillbert Bcurtis K, cabra. R. The measurement and meaning of unintended pregnancy. *Int perspect sex Reprod Health*. 2003; 35 (2) 2: 94-101.
- [11] Hamdela B, G/mariam G, Tilahun T, Unwanted Pregnancy and Associated Factors among Pregnant Married Women in Hosanna Town, Southern Ethiopia, 2012.
- [12] James Trussell, AnjanaLalla, Quan Doan, Eileen Reyes, Lionel Pinto, Joseph Gricar (2009). "Cost effectiveness of contraceptives in the United States". *Contraception* 79 (1): 5–14.
- [13] Finer, Lawrence B.; Kost, Kathryn (May 2011). "Unintended Pregnancy Rates at the State Level". *Perspectives on Sexual and Reproductive Health* (May 2011), 43 (2).
- [14] Fortney, Maternal mortality in Indonesia and Egypt. *International Journal of gynecology and obstetrics*, 1998, 26 (1); 21-32.
- [15] sssEthiop *J Health Sciv*. 20 (2); Jul 2010 PMC3275838.
- [16] Kenya National Bureau of Statistics (KNBS) and ICF Macro: Kenya demographic and health survey, 2008–09. Calverton, Maryland: KNBS and ICF Macro; 2010. PubMed Abstract | Publisher Full Text.
- [17] Centre for the Study of Adolescence: Down the drain: counting the cost of teenage pregnancy and school drop Out in Kenya. CSA: Nairobi: The center for study of adolescence; 2008.
- [18] Central stastical Agency and ICF international 2012.
- [19] Gipson, Jessica D., Michael A. Koenig, and Michelle J. Hindin, "The effects of unintended pregnancy on infant, child, and parental Health: A review of the literature." *Studies in Family Planning* 2008 39 (1): 18–38.
- [20] Cunning ham FG, Leveno KT, Bloom SL, Hauth JC. Williams Obstetrics. 23rd edition. Vol. New York, NY, USA: McGraw–Hill; 2009.
- [21] WHO media center <http://www.who.int/mediacenter/factsheet/fs351/en/>
- [22] WHO unsafe abortion global and regional estimate of unsafe abortion and associated mortality in 2008. Geneva WHO 2011.
- [23] Abortion incidence and access to services in the United States "journalists Resource org, retrieved 20 march 2012.
- [24] Stephanie Pappas, Live Science Senior Writer | April 24, 2012 06: 43pm ET 2013.
- [25] WHO unsafe abortion incidence and mortality global and regional levels in 2008 and trends during 1990-2008 information sheet. Geneva WHO 2012.
- [26] Central Statistic Authority (CSA), National family and fertility survey, A. A 2003
- [27] G/Selasia H, Abdel A, The estimated incidence of induced abortion in Ethiopia (March 2010) 36 (1).
- [28] zolan, M, and L, Lindberg, unintended pregnancy: Incidence and out comes among young adult unmarried women in the united states, Guttmacher Institute, 2012.
- [29] Singh, S, J, E and Darroch, Adding It Up: costs and Benefits of contraceptive services Estimates for 2012. Guttmacher Institute and United Nations population fund (UNFPA), 2012: p.
- [30] Gebreamlak, W. Magnitude and factors influencing unintended pregnant among pregnant women attending antenatal care at felege hiwot referral hospital, North West Ethiopia: Across-sectional study. *Science Journal of public health*, 2014. 2 (4).
- [31] Central Statistical Egency of Ethiopia summary and statistical report of the 2007 population and housing census (accessed January, 06, 2016) available at <http://www.esao.gov.et/pdf/cen2007firstdraft.pdf>.
- [32] Mulat S, Fekadu M, Abera H, Bekele G, Bedaso prevalence of unplanned pregnancy and Associated factors among mothers attending Antenatal care at Hawassa city public Hospitals, Hawassa, SNNPR, Ethiopia, 2017.
- [33] Ikamari L. izugbara, c, coochako R. prevalence and determinant of unintended pregnancy among women in Nairobi, Kenya *BMC pregnancy child birth*. 2013, 13 (69).
- [34] Gebreamlak, W. et magnitude and factors influencing unintended pregnancy among pregnant women attending ANC care at felege hiwot referral hospital North West Ethiopia across sectional study, *science journal of public health* 2014. 2 (4).
- [35] Adhikari, R, Soothomdhada k, prasortkul p. correlates of unintended pregnancy among currently pregnant women in Nepal, *BMC international health human rights* 2009: 9 (17).
- [36] Wado, YD. etal unintended pregnancy and the use of maternal health service in south west Ethiopia, *BMC international health human right*, 2013: 13 (36).
- [37] Faye CM, Speizer ls, Fotso SC, corron M, kooumtingue D. unintended pregnancy magnitude and correlates in six urban site in Senegal *repor health*, 2014: 11 (63).
- [38] Exavery A, kante AM, Njozi M, Tani K, Doctor HV, Hingora A, phillips JF predictor of mistimed and unwanted pregnancy among women of child bearing age in Rufiji, kilomber, and ulanga districts of Tanzania. *BMC Repored health*, 2014: 11 (63).
- [39] Kassa N, Berhane Y, Worku A, predictors of unintended pregnancy in Kersa, Eastern Ethiopia, 2010. *Reproductive health journal*, 2012; 9 (1=7yb).
- [40] Teshome FT, Hailu AG, Teklehaymanot AN. Prevalence of unintended pregnancy and associated factors among married pregnant women in Ganji woreda, west Wollegga oromia region, Ethiopia. *sc J public Health*. 2014; 2 (2); 92-10.
- [41] Eggleston, E, Determinates of unintended pregnancy among women in Ecuador, *family Health international* 199. 25 (1); p. 27-33.
- [42] Canadian pharmacists associations; emergency contraceptive Question and Answers, 2000.