Research Article
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Prevalence and associated factors of unintended pregnancy among pregnant women of reproductive age group in chencha woreda, gammo gofa zone, Southern Ethiopia

Abstract

Introduction: Unintended pregnancies and unplanned births can have serious health, economic, and social consequences for women and their families. The immediate outcome of some unintended pregnancies is induced abortion which is unsafe in many countries that have highly restrictive abortion laws. In these countries, abortion often damages women's health and sometimes results in their death.

Method: A community based cross-sectional study was conducted. A total of 420 study participants were recruited. Simple random sampling was used to draw participants; the collected data were entered into EPI- Data version (7.9.0.) and then exported to SPSS Version 20.0 for analysis. Descriptive statistics, binary and multiple logistic regression analysis were carried out, Odds ratio with 95% CI were calculated.

Result: the prevalence of unintended pregnancy was found to be 30.2%. Multiple logistic regression results showed that the previous history of abortion (AOR=8.262; 95%CI=3.692, 18.489), not discussing the sexual reproductive health (SRH) issues with their husband (AOR=3.086; 95%CI=1.830, 5.205) age of the last child less than three years (AOR=1.870; 95%CI=1.100, 3.179) were significantly associated with unintended pregnancy.

Conclusion: This study shown that the prevalence of unintended pregnancy is high in the study area, hence, strengthening the provision of post abortion services, counseling on long term family planning services and male involvement in all reproductive health services are highly recommended.

Keywords: Unintended pregnancy, chencha woreda, Gammo Gofa zone

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Abbreviations and acronym: ANC, antenatal care; ECM: emergency contraceptive method; FP, family planning; HC, health center; HDA: health developmental army; HEW, health extension worker; MCH: maternal and child health; MP, mistimed pregnancy; SNNPR, southern nation nationalities and people republic; UIP, unintended pregnancy; UWP, unwanted pregnancy; WHO, world health organization

Introduction

Unintended pregnancy is associated with an increased risk of problems for the mom and baby. If a pregnancy is not planned before conception, a woman may not be in optimal health for childbearing. For example, women with an unintended pregnancy could delay prenatal care that may affect the health of the baby.[1] Globally, approximately 40 percent of pregnancies or 85 million pregnancies were unintended in 2012, of these, 50 percent ended in abortion, 13 percent ended in miscarriage, and 38 percent resulted in an unplanned birth.[2] Unintended pregnancies and unplanned births can have serious health, economic, and social consequences for women and their families.[3] One immediate outcome of some unintended pregnancies is induced abortion which is unsafe in many countries that have highly restrictive abortion laws. In these countries, abortion often damages women's health and sometimes results in their death.[4]

The World Health Organization (WHO) estimates that every year, nearly 5.5 million African women have an unsafe abortion. As many as 36,000 of these women die from the procedure, while millions more experience short- or long-term illness and disability.[5] In sub Saharan Africa, it is estimated that 14 million unintended pregnancies occur every year, with almost half occurring among women aged 15-24 years.[6] In Ethiopia there is a five-fold increase in the use of a method of contraception by currently married women, from 8 percent in 2000 to 42 percent in 2014.[7] In 2005, Ethiopia expanded its abortion law, which had previously allowed the procedure only to save the life of a woman or protect her physical health. Abortion is now legal in Ethiopia in cases of rape, incest or fetal impairment. In addition, a woman can legally terminate a pregnancy if her life or her child's life is in danger, or if continuing the pregnancy or giving birth endangers her life. Notwithstanding the new law, almost six in 10 abortions in Ethiopia are unsafe.[8] Despite this effort the prevalence of unintended pregnancy is very high. Hence studying the prevalence and associated factors of unintended pregnancy is of great importance, which would help to design useful strategies and cost-effective interventions to reduce the burden of unintended pregnancy.

Methods

Study setting, period and design

The study was conducted in Chencha Woreda, Gammo Gofa zone, Southern Ethiopia, from June 17 to July 2, 2018. Chencha Woreda

is one of 13 woredas in Gammo Gofa zone, Southern regional state which is located at 250 Km south of the capital of southern regional state, Hawassa; and 480 km south east of the capital city of Ethiopia, Addis Ababa. It is bordered by Kucha and Boreda weredas in the North, Arbamich zuria wereda in the south, Mirab-Abaya wereda in the east and Dita in the west. It has 50 rural administrations which are called Kebele and currently the woreda covers an estimated area of 445 km2 and is divided into 45 rural peasant associations and 5 urban dwellers associations. According to the data obtained from the woreda health office, 2016/2017 projected population of the woreda is around143, 560 from the total population, the number of women in child bearing age is 33,449 of these 4967 women expected to be pregnant and currently there are 1234 pregnant mothers in the woreda. The last year family planning coverage of the woreda is 76%. There are 1 district hospital, 7 health centers, 5 private clinics, two drug venders and 49 health posts with 2 health extension workers in each Kebeles (small administrative unit).[9] A community based cross-sectional study design was conducted to assess the prevalence and associated factors of unintended pregnancy.

Sample size determination

The required sample size was determined by using EPI-INFO version 7.1 by considering single population proportion based on the following assumptions. The prevalence of unintended pregnancy among pregnant women was estimated to be (36.5%).[10] A level of confidence of 95% and a margin of error of 5% were also considered and the final sample size became 356. For associated factors the required sample size was determined by using EPI-INFO version 7.1 by considering double population proportion based on the assumptions (Table 1)**.** Data collection tool and procedure: A pre-tested and semi-structured interview questionnaire was used for data collection. The questionnaire has different pats: question related to socio-demographic variables, fertility related variables, access to health information and services, family planning related variables and pregnancy intention questions were used to determine the prevalence and identify factors of unintended pregnancy among currently pregnant women in the woreda. The questionnaires was prepared in English and translated to Amharic & prior to the start of field work; the question was pre-tested among 5% of women in Arbaminch zuria woreda to make sure that the questions were clear and could be understood by the respondents. It was translated back to English to keep consistency. Then it was checked for its clarity and understandability. Findings and experiences from the pre-test was used to modify and rearrange the data collection instrument. Data was collected from June 17 to July 2, 2018 at Chencha woreda. 15 female BSc Midwife data collectors and 6 supervisors who had direct experience were recruited for the data collection.

Table 1 for associated factors the required sample size was determined by using EPI-INFO version 7.1 by considering double population proportion based on the assumptions

For identified factors(26 & 27)	AOR	Proportion
1. ANC visit(non visitors)	3.43	58.7
2. Ever heard contraceptive (not heard)	2.8	69.1
3. Husband disagreement	2.26	53.3

Study variables and measurements

Dependent variable

Unintended pregnancy (unwanted and mistimed pregnancy)

Independent variables

Socio demographic and economic characteristics:

i. Age, religion, marital status, residence, educational status, occupational status, women's decision making power/autonomy of women

ii. Fertility related factors:

iii. Age at first marriage, gravidity, parity, history of abortion, history of still birth, age of last living child

iv. Family planning related factors:

v. Knowledge about FP, use of contraceptive methods

vi. Access to health information and services

vii. Source of family planning information, accessibility of the services (distance from home).

Data quality assurance: To ensure the quality of data, data collectors were trained on data collection, how to keep confidentiality of information, the contents of the questionnaire and data quality management by the investigators for two days. Training was given to data collectors and supervisors. On the days of data collection, the investigators were supervising the data collection process by checking the completeness of the data. Clarity was made on all content of the formats and areas of difficulties were discussed and direction on possible solutions was grounded. The questionnaire was checked by data collectors & supervisors a daily base for completeness and consistency.

Data analysis and processing: The collected data was checked for completeness and consistency by the investigator. The data was cleaned, coded and entered into EPI- Data version (7.9.0.) and then exported to SPSS Version 20.0 for analysis. Multicollinearity test was made to see the interaction of explanatory variables. Descriptive statistics was computed and described using tables, figures, and charts. Binary and multiple logistic regression analysis were carried out to assess the effect of potential factors on occurrence of unintended pregnancy. Odds ratio with 95% CI was calculated to measure the strength of association between explanatory variables and the outcome variable.

Ethics approval and consent to participate

Ethical approval was obtained from the ethical review committee of the college of Medicine and Health Sciences, Arbaminch University. Letter of permission was also obtained from Chencha Woreda Health Office. Verbal consent was obtained from study participants. Similarly, the participants were informed about the purpose of the study. As if all information gained during data collection were kept confidential and any personal identification was not be recorded on the questionnaire.

Results

Socio-demographic and economic characteristics

From 420 sampled women 414 were interviewed making a response rate of 98.6%. The mean age of the women were 29.07 having standard deviation of 5.475. Majority of the respondents 264(63.8%) are found between 24–34 years of age. About 262 (63.3%) of the women were reside in rural area, 243(58.7%) of the women are Orthodox religion follower and 403(97.3%) were ever married, 177(42.8%) women and 120(29.8%) husbands of pregnant

women's were do not have education and 169(40.8%) of them were house wife (Table 2).

Table 2 Distributions of socio-demographic characteristics of pregnant women in Gammo Gofa zone, Chencha Woreda, 2018

Variable	Frequency
Age n=414	
15 to 19	14
20 to 24	61
25 to 29	152
30 to 34	112
35 to 39	58
40 to 44	15
>45	2
Total	414
Residence=414	
Urban	152
Rural	262
Total	414
Religion=414	
Orthodox	243
Protestant	169
Others	2
Total	414
Marital status=414	
Never married	11
Ever married	403
Total	414
Educational level 414	
No education	177
Primary	53
Secondary	103
Above secondary	81
Total	414
Husband educational level = 403	
No education	120
Primary	50
Secondary	124
Above secondary	109
Total	403
Occupational status 414	
House wife	169
Student	35
Farmer	51
Merchant	64
Private work	27
Gov't employee	65
NGO employee	3
Total	414

Reproductive history of pregnant women

From the total pregnant women 164(39.6%) had one to two & 87(21%) of women had five and above number of pregnancy, 79(19.5%) pregnant women have no live birth & 8.7% of women had five and above number of live births, 278(67.1%) of women had their first sex at the age of 18 years and above, 41(9.9%) of women had previous history of abortion, 14(3.4%)of women had previous history of still birth, 181(54%) of women had age of last child less than three years. Out of the total pregnant women 125(30.2%) of women have not planned their current pregnancy, 182(45.2%%) of women who have no discussion on SRH issues with their husband and 51.4% of women claimed that decision making power of everything in the household were pertaining to their husband (Table 3).

Table 3 Reproductive history of pregnant women in Gammo Gofe zone, Chencha Woreda, 2018

Variables	Frequency	
No of pregnancy		
1 to 2	164	39.6
3 to 4	163	39.4
5 and above	87	21
Total	414	100
No of live birth		
no live birth	79	19.1
1 to 2	176	42.5
3 to 4	123	29.7
5 and above	36	8.7
Total	414	100
Age at first sex		
Before 18	136	32.9
18 years and above	278	67.1
Total	414	100
No of abortion		
Yes	41	9.9
No	373	90.1
Total	414	100
No of still birth		
Yes	14	3.4
No	400	96.6
Total	414	100
Age of last child		
Less than 3 years	181	54
3 years and above	154	46
Total	335	100
Pregnancy intention		
Intended pregnancy	289	69.8
Unintended pregnancy	125	30.2
Total	414	100
Discussion on SRH issues		
Yes	221	54.8
No	182	45.2
Total	403	100
Decision making power		
Husband	207	51.4
Wife	55	13.6
Both	141	35
Total	403	100

Access to health information and services for pregnant women in Gammo Gofe zone, Chencha Woreda, 2018

From 414 pregnant women 178(43%) were access their nearby health facility within 30 minutes to 1 hour walking distance & 10(2.4%) were access after 2 hours waking distance as stated in the fig 5.2 below. 372(89.9%) of pregnant women were visited the nearby health facility in this pregnancy (Figures 1 & 2).

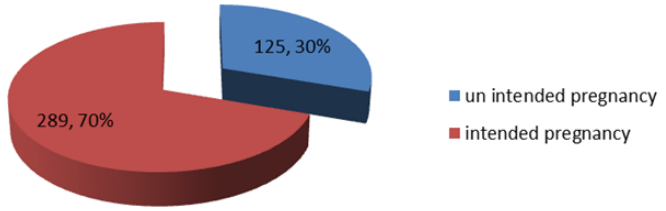

Figure 1 Pregnancy intention among pregnant women in Gaammo gofa zone, Chencha worda, 2018.

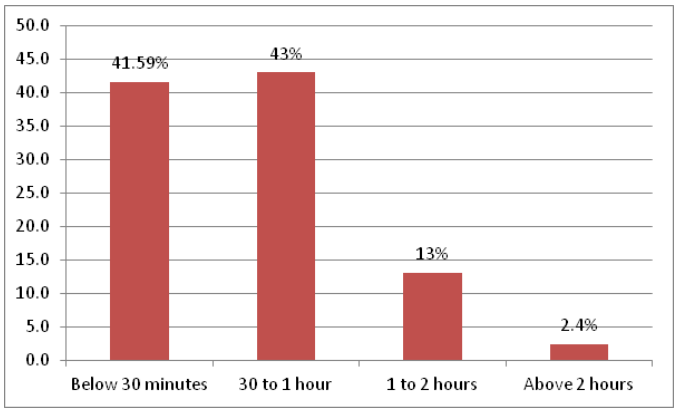

Figure 2 Time taken to reach the nearest health facility among pregnant women in Gaammo Gofa zone, Chencha woreda, 2018.

Contraceptive method knowledge and practice of pregnant women in Gammo Gofe zone Chencha Woreda, 2018

Out of 414 pregnant women 401(96.9%) were informed about FP from different sources, 38(9.5%) were informed from radio or TV, 86(21.4%) from health care providers, 132(32.9%) from HEWs, 78(19.5%) from friends or relatives, 11(2.7%) from school and 56(14.0%) were informed from two or more sources of information. From 414 pregnant women 293(70.8%) have inadequate or poor knowledge and the rest 121(19.2%) of them have adequate or good knowledge on contraceptive options. Three hundred and fifteen pregnant women ever used contraceptive method and 99(23.9%) were never used any type of contraceptive method. Out of 315 contraceptive method users 27(8.6%) use pills, 2(0.6%) use condom, 211(67.0%) use injectable, 59(18.7%) use implant, 7(2.2%) use calendar and 9(2.9%) were used two or more contraceptive methods (Figure 3).

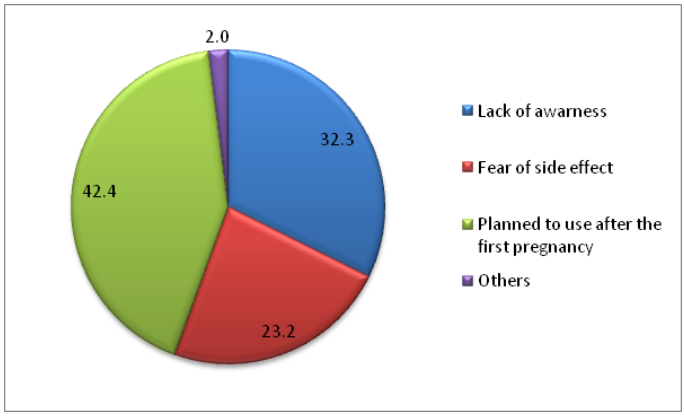

Figure 3 Distribution of reason for not using contraceptive method among pregnant mothers in Chencha woreda, Gaammo Gofa zone, 2018.

Table 4 Logistic regression analysis result of factors associated with unintended pregnancy in Gammo Gofa zone, Chencha woreda, 2018

Variables	Un Intended pregnancy (%)	Intended pregnancy (%)	COR(95% CI)	AOR(95%CI)
Abortion				
Yes	30	11	7.98(3.850,16.545)	8.262(3.692, 18.489)
No	95	278	1	1
Discussion with husband on SRH issues				
No	78	104	1	1
Yes	40	181	3.394(2.162,5.33)	3.086(1.830, 5.205)
Age of last child				
<3 years	67	114	1.93(1.192,3.113)	1.870(1.100, 3.179)
>=3 years 118	36	118	1	1
Age at first sex				
Before 18 years	55	81	2.018(1.304,3.122)	0.594(0.350,1.009)
At and after 18	70	208	1	1

NB: *ANC refers Antenatal care
*Gov't refers Government
*NGO refers Non-government
*SRH refers sexual and reproductive health

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Factors associated with unintended pregnancy

Eight variables that have less than 0.25 p-value were entered in multiple logistic regression model, Out of them previous history of abortion, Communication on SRH issues and age of last child were significantly associated with unintended pregnancy. The likelihood of unintended pregnancy were 8.262 times higher (AOR=8.262; 95%CI=3.692, 18.489) among mothers who have previous history of abortion as compared to mothers without previous history of abortion, the likelihood of unintended pregnancy were 3.086 times higher among mothers who does not have Communication on SRH issues with their husband (AOR=3.086; 95%CI=1.830, 5.205) as compared to couples who communicate. And the likelihood of unintended pregnancy were 1.870 times higher(AOR=1.870; 95%CI=1.100, 3.179) among mothers whose age of last child were less than three years as compared to mothers with age of last child were three years and above (Table 4).

Discussion

In this study of 414 studied, 125(30.2%), with 95%CI; (26.1, 34.3) reported that their most recent pregnancy were unintended and previous history of abortion, absence of discussion on SRH issues and age of last child were significantly associated with unintended pregnancy. The prevalence of unintended pregnancy conducted in West Iran (31.6%), Helwan district (32.4%), Sudan (30.2%), and Bangladish(30%) are consistent with our study.[11-14] The prevalence of unintended pregnancy in Chencha woreda is higher than study conducted in Nirobi keniya(24%), Tigray region(26%) and Debrebrhan(23.5%)[15-17] this might be due to lack of infrastructure to access family planning services from health facility, absence of sexual and reproductive health information access from media and responsible institutions, absence of different private health facilities as a result of infrastructure barrier.

The prevalence in our study area was lower than study conducted in Malawi (45%), West Nigeria (35.9%), Ganji woreda Oromiya region (36.5%), Kersa, Eastern Harerge(33.3%) and Hosana(34%).[13,10,18-21] This might be due to cultural and religious barrier to not use the contraceptive method in the other study areas. Pregnant women with previous history of abortion were 8.262 times more likely to experience unintended pregnancy as compared to mothers without previous history of abortion. Similarly, studies from Arsi Negele Woreda, West Arsi Zone revealed similar finding.[14] This shows absence of post abortion care service, and long acting contraceptive method counseling. The likelihood of unintended pregnancy were 1.870 times higher among mothers whose age of last child were less than three years as compared to mother whose last child is 3 years and above, this finding is similar with Iran study showed that age of the last living child were the main risk factor of unwanted pregnancies.[22] And absence of discussion on SRH issues were 3.086 times higher than that of mothers who have discussion on SRH issues with their husband, similarly study done in Damot Gale district, revealed that those who discuss about FP issue were 57% less likely to experience unintended pregnancy as compared to the reference category.[23]

Conclusions

The study has shown that prevalence of unintended pregnancy was high in the study area. Previous history of abortion, no discussion on SRH issues with husband and age of last child were significantly associated with unintended pregnancy.

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Competing interests

All authors assert that they have no conflict of interest.

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