

Research

Unintended Pregnancy And Associated Factors Among Pregnant Women Who Seek Health Care At Hidar 11 Hospital In Legambo Woreda, North East Ethiopia

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Abstract

Background: unintended pregnancy is an important public health issue in both developing and developed countries because of its consequence for women and their family, which includes the possibility of unsafe abortion, delayed prenatal care, poor maternal mental health and poor child health outcome.

Objective: the main objective of this study was to identify the magnitude and associated factors with unintended pregnancy among pregnant woman in Legambo woreda who seek health care at Hidar 11 hospital.

Method and materials: Institutional-based cross-sectional study that involved an exit interview was conducted from May 3-May 17, 2017 in Hidar 11 hospital in Akesta town, north east Ethiopia. A total of 319 pregnant women who seek health care were enrolled in the study. Random sampling technique was used to select study participants. Data were entered to Epi-Data version 3.1 and transported to SPSS version 21 for further analysis. Binary Logistic regression with 95% Confidence interval was applied to identify association between explanatory variable and the outcome variable. Candidate Variables with P-value less than 0.25 in the bivariate analysis was included in the multiple logistic regression analysis using backward stepwise method to develop model and identify predictors for unintended pregnancy. Then variables P-value of less than 0.05 was taken as significance.

Results: The proportion of unintended pregnancy in this study was 24.8%. The most common reasons why they experienced currently unplanned pregnancy were not using family planning (41.7%), contraceptive failure (26.5%), due to husband desire (25.3%) and rape (6.3%), respectively. Women educational status cannot read and write [AOR=0.2, 95%CI: 0.033-0.909], husband child desire [AOR=163.8, 95% CI: 17.939-1495.812], had less than three antenatal care follow up visits previously [AOR= 10, 95% CI: 1.747-60.021] and Women who never used any modern method of family planning [AOR=0.2, 95% CI: 0.037-0.957] were independent predictors of unintended pregnancy.

Conclusion and Recommendations: the proportion of unintended pregnancy in this study was found to be high. Efforts need to be intensified to improve the awareness about family planning in the community and expanding educational infrastructures which focus on striplings to significantly bring a change on unintended pregnancy.

Key words: - Unintended pregnancy; Hidar 11 hospital and pregnant women.

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Introduction

Unintended pregnancy is either unwanted or mistimed at the time of conception [1-3]. It has a great impact on the health of all fecund sexually active women in both developed and developing countries. Unintended pregnancy can lead to unwanted birth or abortion which could be unsafe; it might affect the mother, child and the society at large in different circumstances. For instance, there may be unsafe abortion, delayed or no prenatal care, poor maternal mental health, reduced mother/child relationship quality, physical abuse and violence against women, poor developmental outcomes for children, increased risk of low birth weight as well as increased morbidity and mortality [2, 3].

Unintended pregnant women will have low physical and mental health, low self-care, poor health, high level of substance addiction, and

depression during pregnancy [4, 5]. besides fetus will be delivered by unskilled attendant, delivered as low birth weight, increased rate of hospitalization, poor growth and inadequate immunization adversely leads to maternal and child death [5,6].

In 2012 worldwide 80 million mothers had unintended pregnancy [7, 8]. Regionally, in more developed regions it is revealed to be 42 per 100,000. In less developed regions from 100,000 pregnancies 57 of them were unintended and the pregnancies end up with unplanned birth, abortion and miscarriage. Unintended pregnancy is 36% higher in developing country than developed country. In Africa from a total of 49.1 million pregnancy 39% were unintended pregnancy [9].

In Ethiopia, the number of unintended pregnancy has been increasing and by this preventable public health problem, large numbers of

mothers and children are affected even though such problems are preventable [11, 12]. Because of this, many women in Ethiopia perform safe and unsafe abortion every day in clandestine manner [13].

Even though there are limited studies done in Ethiopia which were primarily focusing on unwanted pregnancy in the rural communities, the current study was unique because it was designed to be conducted among health facility attendant women urban area of Ethiopia. Little was investigated on unintended pregnancy in North east Ethiopia particularly in urban and health facilities. There should be an urgent measure to identify reasons why unintended pregnancy proportion indicator among facility attendant pregnant women. This study was aimed to measure the proportions unintended pregnancy and to investigate factors associated with them amongst health facility attendant pregnant women to generate information for prevention of unintended pregnancy.

Methods and Materials

Study Area, Study Design and Participants

Institutional based cross sectional study was conducted in Hidar 11 hospital, legambo woreda , North east Ethiopia from May 3- 17, 2017. Akesta is the administrative town of Legambo woreda, which is located 501 km from Addis Ababa, 100 km far west of Dessie. Hidar 11 Hospital is found in Akesta town. The town has total surface area of 158 hectares and placed on the altitude of 3880 meter above sea level and it is dividing in to three ketenas. The total population of town 29,871 is of which 15235 are female and 14636 of them are male. The number of pregnant mother in the town was estimated 1007. Concerning the health and health related facilities found in Akesta were one health center, one district hospital, five health posts, two private clinics and two private pharmacy in the town. Pregnant women who seek any health care in Hidar 11 hospital were the source population. Whereas, women that were drawn from pregnant women who attended to seek any health care in the study area were considered as the study population. All pregnant women attended Hidar 11 hospital to seek any health care during data collection were included in the study by considering the assumption client flow at health facility is random. Pregnant women who were seriously ill, mental problem or unable to communicate were excluded.

Sample size and sampling procedure

Sample size was calculated, using single population proportion formula by taking proportion of unintended pregnancy 26% and considering the following assumptions of Confidence level (Z) - 95%, Margin of error(α) - 5%, proportion-26% [13] and 10% non-response rate. Finally 325 sample size was determined. To ensure the adequacy of sample size, Epi-info was used to calculate sample size for factors associated with unintended pregnancy. Then the maximum sample size 325 was taken. We select Hidar 11 hospital purposively by observing many pregnant women who were seek abortion care services. We took respondents consecutively until we got adequate sample size by considering the assumption of patient flow in health facility is random.

Data Collection and Measurements

Data were collected by validated structured interviewer administered questionnaire in a face-to-face exit interview manner. The tool was developed by reviewing different literatures and customized based on the study objective. The questioner was prepared first in English then translated to Amharic the official language to check consistency were used and translated into local language by fluent speakers and back translated to English to validate the consistency. Training was given for

data collectors and supervisors on how to interview and maintaining the quality of data. Pre-test was done on five percent of the participants out of the selected areas in Tenta hospital. Then the questionnaire was rechecked for its precision and consistency and necessary modifications were incorporated before commencing the actual data collection. The supervisors and the investigatory were regularly monitored and checked the completeness of the data in daily bases. Interview (face to face) was conducted to maximize the quality of data generated. A total of 319 mothers was interviewed. Data was collected by five trained health officer undergraduate students and two health expert supervisors. As much as possible to check completeness of the data during data collection data collectors and supervisors discussed each other every day and record appropriately. The collected data was checked for completeness, clarity and consistency.

Ever used: - Is a woman who had used a modern contraceptive before in the past.

Mistimed: - a pregnancy, which has occurred without the wish of the woman at the specific time, but she has a desire to be pregnant and have a child in the future.

Pregnant women: - a woman who claims that she was told to be pregnant by health worker on her visit to health institution and believes to be pregnant.

Unintended pregnancy: -is a pregnancy, which is either mistimed or unwanted at the time of conception

Unwanted: - Pregnancy that has occurred to the women when no children or no more children were desire

Statistical analysis and interpretation

Data were entered to Epi-Data 3.02 and exported, cleaned and analyzed by SPSS version 21. The collected data was processed which involves categorizing the questions; coding computerization and preparation of tables and diagrams the above procedure helps us to minimize data error. Missed data were explored and normality for variables was checked by p-p plot. Descriptive statics for continuous variables, proportion for categorical variables, Odds ratio to see strength of association, bivariate analysis to select candidates for multivariate logistic regression and multivariate logistic regressions analysis was performed to control confounders. Candidate Variables with P-value less than 0.25 in the bivariate analysis was included in the multiple logistic regression analysis using backward stepwise method to develop model and identify predictor factors for unintended pregnancy. Then variables P-value of less than 0.05 was taken as significance. Result was organized and presented using tables, graphs, charts and statement.

Result

Characteristics of Participants

The response rate of this study was 98.2%. From 319 study participants 124 (35.7%) of them were in age group of 25_29 years that was followed by 20-24 age group 103 (32.3%). Ninety (28.2%) of respondents were can not read and right. Majority 248(77.74%) of the respondents can access the health facility within ≤ 10 Km [Table-1].

Reproductive and Contraceptive Utilization characteristics

From the total study participants, 190 (59.6%) had previous pregnancy and 40 (21%) had previous unintended pregnancy. Most of them 23 (57.5%) occurred within the last 3 years. The major reason for the unintended pregnancy is related to absence of family planning 29 (72.5%). About 30 (15.8%) of previously pregnant mothers had history of abortion among them 4(13.4%) was induced. [Table 2].

Characteristic	Categories	Frequency (%)
Age	18-24	137(45.4)
	25-39	182(54.6)
Marital status	Ever Married	294(92.2)
	Single	25(7.8)
Educational status	cannot read and write	90(28.2)
	only read and write	81(25.4)
	primary school	81(25.4)
	secondary school	41(12.9)
Educational status of her husband	college /university	26(8.2)
	cannot read and write	87(27.3)
	only read and write	86(27)
	primary school	57(17.9)
Occupation	secondary school	44(13.8)
	college /university	45(14.1)
	Farmer	104(32.6)
	government employee	38(11.9)
	Merchant	62(19.4)
Monthly income	daily laborer	9(2.8)
	Student	22(6.9)
	Housewife	84(26.3)
	0-600	123(38.6)
Number of family member	601-1650	130(40.8)
	1651-3200	52(16.13)
	>3200	14(4.4)
	1-3	317(99.4)
Far from health facility	4-6	2(0.6)
	<10km	248(77.7)
	>10km	71(22.3)

Table 1: Socio demographic and economic characteristics of study participants in Hidar 11 Hospital akesta town, 2017

Characteristics	Categories	Frequency (%)
pregnancy before current pregnancy	No	129(40.4)
	Yes	190(59.6)
Number of pregnancy including the current	3-Jan	131(41.1)
	6-Apr	129(40.4)
	>6	59(18.5)
Had abortion before	No	160(84.2)
	yes	30(15.8)
Type of abortion	Spontaneous	26(86.6)
	Induced	4(13.4)
Had previous unintended pregnancy	No	150(79)
	Yes	40(21)

Last unintended pregnancy	<3 year	23(57.5)
	>=3 year	17(42.5)
Ideal number of children in your life	4-Feb	160(50.1)
	≥5	65(20.4)
	As God/Allah	94(29.5)
partner desire for child	Agree	262(82.1)
	disagree	37(11.6)
know about family planning	No	23(7.2)
	yes	296(92.8)
where did you hear about family planning	friend	30(10.1)
	health facilities	252(84.8)
Ever used family planning	no	66(20.7)
	yes	253(79.3)

Table 2: Reproductive and contraceptive utilization characteristics of pregnant mothers in Hidar 11 Hospital, Akesta town, 2017

Current pregnancy status of the respondents

This study indicate that majority of respondents 287(90%) want become pregnant their previous pregnancy. Among current pregnant women 114(35.7) did not have antenatal care follow up in their current pregnancy. The common mentioned reasons not attended were early gestational age 55(47.8) lack of awareness 26(23) shortage of time to come to health facility 33(29.9) More common reasons why they experienced currently unplanned pregnancy were not use family panning 33 (41.7%) followed by contraceptive failure 21(26.5%). [Figure 1].

Prevalence of unintended pregnancy

From a total of 319 pregnant mothers 79 (24.8%) participant insured their current pregnancy as unintended, from this 32 (10.05%) reported their pregnancy as unwanted and the rest 47 (14.75%) accounted their pregnancy as mistimed [Fig 2].

Factors Associated with unintended pregnancy

The association between the study variables and unintended pregnancy was observed. On the binary logistic regression analysis, age of respondent, marital status, educational status of the respondent, mother occupation, estimated monthly income, heard about family planning, previous unintended pregnancy, Decide about mothers health, husband child desire and ever used family planning were associated with unintended pregnancy.

But after controlling confounders in multiple logistic regression analysis educational status of the respondent, Number of previous

antenatal care, husband child desire and ever used family planning were independent predictors of unintended pregnancy

Women whose educational status cannot read and write were 80% more likely to have unintended pregnancy as compared to those women whose educational status is secondary school and above [AOR=0.2, 95% CI: 0.033-0.909]. Those women whose husband had child desire have 163 times risk of having unintended pregnancy than those husband's had no child desire [AOR=163.8, 95% CI: 17.939-1495.812]. Those women who had less than three antenatal care follow up visits have ten times greater risk of unintended pregnancy as compared to women who have three and above antenatal care follow up at health facilities [AOR= 10, 95% CI: 1.747-60.021]. Women who never used any modern method of family planning have 80% greater risk of having unintended pregnancy as compared to those ever used any modern family planning method previously. [AOR=0.2, 95% CI: 0.037-0.957]. [Table 3].

Discussion

This study has assessed prevalence and associated factors of unintended pregnancy among pregnant women in Hidar 11 hospital, legambo wereda, South Wollo zone, North east Ethiopia. Accordingly, in this study 24.8% of their current pregnancy was unintended pregnancy. From these unintended pregnancies, 14.75% of them were mistimed and 10.05% were unwanted. It was higher than a study done in Senegal which showed that, 14.3% of ever-pregnant women reported having a recent unintended pregnancy [10]. The difference may be due the both population have different background and health care system. But Study done in Amhara Region, Ethiopia, also showed nearly similar to this study which was 26.0% of which 13.7% were mistimed and while 12.3% were

unwanted [13]. The similarity may be due to the same health care system and socio cultural characteristics. But lower than the study in west wollega 36.5% of pregnancy was unintended [12]. The difference may be due to different cultural background.

In this study the most common reasons why they experienced currently unplanned pregnancy were not using family planning 41.7%, contraceptive failure 26.5%, due to husband desire 25.3% and

rape 6.3%, respectively. Among those women who became pregnant while using contraceptive (i.e. due to contraceptive method failure) 65% of them used according to recommendations, the rest one third did not take the contraceptives given as per the direction given from the health workers This is consistent with similarly, study done in Felege hiwot referral hospital, among unintended pregnancy 30.8% due to contraceptive method failure, and, 18.5% due to partner disapproval. [13].

Variable	Category	Unintended pregnancy		COR(95%CI)	AOR(95%CI)
		Yes	No		
Age of women	15-24	45	92	2.6[1.509-4.532]** 1	1.8[0.241-14.374] 1
	25-39	26	139		
Marital status	single	19	6	12.4[4.726-32.27]** 1	0.7[0.125-3.702] 1
	Ever married	60	234		
Monthly Income	<=1650	72	181	3.4[1.462-7.687]** 1	0.1[0.010-1.333] 1
	>1650	7	59		
Number of ANC	Less than 3	18	147	1.4[1.108-1.873]** 1	10.2[1.747-60.021]** 1
	Three and more	11	54		
Partner agreement to limit/space family size	Disagree	45	233	0.1[0.017-0.098]** 1	163.8[17.939-1495.812]** 1
	Agree	33	7		
Mother Occupation	Unemployed	38	175	2.9[1.718-4.912]** 1	1.4[0.229-8.462] 1
	Employed	41	65		
Heard about family planning	no	12	11	3.7[1.574-8.831]** 1	0.4[0.015-9.645] 1
	yes	67	229		
Previous unintended pregnancy	no	64	220	0.2[0.116-0.536]** 1	0.1[0.002-3.156] 1
	yes	15	20		
Abortion History	no	26	139	0.3[0.120-0.621]** 1	17.7[0.727-431.280] 1
	yes	13	19		
Decide for your health	myself	29	21	4.5[2.487-8.289]** 1	0.2[0.007-4.902] 1
	my husband and me	47	208		
	my husband	3	11		
Ever used family planning	no	33	33	4.5[2.523-8.027]** 1	0.2[0.037-0.957]** 1
	yes	46	207		
Educational status of the respondent	Can't read and write	28	62	5.3(1.197-24.531) * 2.5(0.530-11.852) 3.9(0.853-18.140) * 1	0.2(0.033-0.909)* 1
	Only read and write	14	67		
	Primary school	20	61		
	Secondary school	15	26		

Table 3: Bivariate and multivariate analysis of factors associated with unintended pregnancy in Hidar 11 Hospital, Akesta town, North east Ethiopia 2017.

Note 1 reference * statistically significant at P<0.05 and **p<0.01

In this study, age of respondent, marital status, educational status of the respondent, mother occupation, estimated monthly income, heard

about family planning, previous unintended pregnancy, Decide about mothers health, husband child desire and ever used family planning

were associated with unintended pregnancy. It is consistent the study conducted West Wollega and Hosanna [11, 12]. But after controlling confounders in multiple logistic regression analysis educational status of the respondent, Number of previous antenatal care, husband child desire and ever used family planning were independent predictors of unintended pregnancy.

In this study knowledge and attitude had not association with unintended pregnancy. But the study conducted in west Wollega revealed that knowledge level of respondents were significantly contributing to unintended pregnancy. The discrepancy may be due to this study was conducted in Hidar 11 hospital and most of the participants were urban dwellers with no difference in information source and awareness.

In this study Women whose educational status cannot read and write were 80% more likely to have unintended pregnancy as compared to those women whose educational status is secondary school and above. Those women whose husband had child desire have 163 times risk of having unintended pregnancy than those husband's had no child desire. Those women who had less than three antenatal care follow up visits have ten times greater risk of unintended pregnancy as compared to women who have three and above antenatal care follow up at health facilities. Women who never used any modern method of family planning have 80% greater risk of having unintended pregnancy as compared to those ever used any modern family planning method previously.

Conclusion

Findings of this study indicate unintended pregnancy was the major reproductive health problems in the study area. Women educational status cannot read and write, husband child desire, had less than three antenatal care follow up visits previously and Women who never used any modern method of family planning were independent predictors of unintended pregnancy. Even if women heard and used about family planning incorrect and inconsistent utilization was high that leads to unintended pregnancy. Gender based violence and sexual partner child desire were also contributed to unintended pregnancy.

Recommendations

To Federal ministry of health: Further in service professional development needed on the prevention of unintended pregnancy by redesigning family planning strategies.

To legambo woreda health office: Work on strategies on information communication and counseling on proper family planning utilization To expand educational infrastructures which focus on striplings to significantly bring a change on the prevalence of unintended pregnancy.

To health workers: Family Planning workup need to target mainly never married, divorced, widowed, separated and as well multigravida mothers through counseling, service and health education on consistence and correct use to encourage family planning users and minimize unintended pregnancy. Incorporate partners in every aspect of maternal health issue to increase couple's communication in their reproductive life.

To researchers: Unlike to this study, conducting a community based study by integrating qualitative with quantitative study is crucial to identify cultural causes of unintended pregnancy. Further research needs to be conducted by using laboratory confirmation mechanism of early pregnancies.

Lists of Abbreviation: - ANC- Ante Natal Care; CSA-Central Statistics Agency; EC- Emergency Contraceptive; EDHS- Ethiopian Demographic Health Survey; FP- Family Planning; IUCD- Intra Utrine Contraceptive Device; MMR- Maternal Mortality Rate; UP- Unintended Pregnancy; WHO- World Health Organization; CI- Confidence Interval; COR-Crude Odds Ratio; AOR-Adjusted Odds Ratio.

Ethical Approval and Consent to Participate

Ethical clearance was obtained from the Institutional Ethical Review Committee of Wollo University, College of Medicine and Health Sciences. After securing the ethical clearance from the University, Support letters were offered from Legambo woreda health office. Moreover, the aim of the study was explicitly explained to the study participants and their verbal Informed consent has been obtained from pregnant women before the start of the interview. However, be explicitly stated that no payment have been given to the research participants for participating as information providers.

Consent for Publication: not applicable.

Availability of Data and Material: the datasets during and/or analyzed during the current study is available from the corresponding author on reasonable request.

Competing interest: - The authors declare that they have no competing interest.

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