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Prevalence of Unplanned Pregnancy and Associated Factors among Mothers Attending Antenatal Care at Hawassa City Public Hospitals, Hawassa, SNNPR, Ethiopia

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Abstract

Background: Unplanned pregnancy is a core concept that is used to better understand the fertility of populations and the unmet need for contraception (birth control) and family planning. Unplanned pregnancy mainly results from not using contraception, or inconsistent or incorrect use of effective contraceptive methods.

Objectives: The aim of the study was to assess the prevalence and factors associated with unplanned pregnancy among clients attending ANC clinic in Hawassa city public hospitals, Hawassa, SNNPR, Ethiopia.

Methods: Institutional based cross-sectional study was conducted among randomly selected 362 mothers attending ANC in Hawassa city public hospitals. Purposive sampling technique was used to select health facilities. Data were collected through interviewer administered technique using Pre-tested structured questionnaire. Data were checked for completeness, consistency, coded and entered in to SPSS version 20 software and analyzed. The association between variables were analyzed using binary logistic regression models and the level of significance of association were determined at P-value<0.05.

Result: The prevalence of unplanned pregnancy was 33.7%. Age, education, occupation, marital status and ever use family planning were significantly associated with unplanned pregnancy. Odds of unplanned pregnancy among illiterate was 4.6 times more likely than unplanned pregnancy compared diploma and above. The odd of unplanned pregnancy was higher by 40 times among others as compared with planned pregnancy of unemployed.

Conclusion and Recommendation: The findings of the study showed that the prevalence of unplanned pregnancy is still higher in the community. There is an apparent need to design strategies of communication within couples on fertility and contraceptive issues through peer education and promote family planning methods.

Keywords: Unplanned pregnancy; Antenatal care; Public hospitals; Family planning

Introduction

An unplanned pregnancy is a pregnancy that is reported to have been either unwanted (the pregnancy occurred when no children, or no more children were desired) or mistimed (the pregnancy occurred earlier than desired) [1]. Unplanned pregnancy can result from not using or incorrect use of contraceptive methods; it can be used to get a clear view in fertility and can also show the unmet need of contraception and family planning [2]. Unplanned pregnancy is a global burden that affects all segment of the population specially women. Many women in sub-saharan Africa are still suffering from unsafe abortion which is a complication from unwanted pregnancy. Ethiopia stands in the fifth row by the maternal mortality ratio of 353/100,00 in 2015, which is very far from achieving MDG 5 of reducing maternal deaths by three fourth [3]. There is a social and health outcome on mother, children and family secondary to unplanned pregnancy; which makes it a major public health concern [4].

Unplanned pregnancy (UP) can lead to unwanted birth or abortion which could be unsafe; this linked to elevated maternal morbidity and mortality, particularly among women in developing countries [5]. Unplanned pregnancy may lead to many complications including but not limited to "unsafe abortion, delayed or no prenatal care, poor maternal mental health, reduced quality of mother/child relationship, physical abuse and violence against women, poor developmental outcomes for children, increased risk of low birth weight as well as increased morbidity and mortality" [1]. Literatures related with unplanned pregnancy in Ethiopia implied that; it is one of the major contributors for maternal death [6].

Many women including the married ones use induced abortion to manage unplanned pregnancy. According to ministry of health 2006 report, nearly 500,000 pregnancies end up induced abortion; which shows that there is high rate of unplanned pregnancy in the country [7]. Therefore, this study aimed at assessing the prevalence and factors associated with unplanned pregnancy among mothers attending public hospitals in Hawassa city administration, which could serve as baseline for other studies in the area and to make subsequent recommendations.

Methods and Materials

Study design and setting

Institutional based cross sectional study was conducted among mothers attending ANC in Hawassa public hospitals (Adare and Referral), Hawassa. Hawassa city, the capital of Southern Nations, Nationalities and Peoples Regional State (SNNPRS) which is located 275 kms South of Addis. The city is subdivided into 8 sub cities having a population of 292,533 (150,486M, 142,047 F among the females 25568 were at their reproductive age) residents (City Administration Annual Report 2011), half of who are living below poverty line.

Sample size determination and sampling procedures

Sample size was determined using single population proportion formula considering the following assumptions, prevalence of unplanned pregnancy=34% [8], a confidence level of 95%, and a 5% degree of precision.

$n=Z^2 \times P\ (1-P)/d^2$

$=(1.96)^2 \times 0.34(1-0.34)/(0.05)^2$

Taking non-respondent rate=5%, the final calculated sample size was 362. The study was conducted in Hawassa public hospitals providing ANC services. Adare and Referral hospitals are purposely selected based on their load and mixture of women who follows ANC services. The study participants were only women who came for their ANC follow-up. The study participants were selected using consecutive sampling method if they agreed and until our sample size is reached. The women were interviewed in nurse's room. The same procedure was followed each day until the sample size is fulfilled. There may be over or under representation of some groups of women since the sampling procedure was not simple random.

Data collection instrument

Data was collected by interview using semi structured questionnaire. The questionnaire we used was used in similar studies in the country. The questionnaire was prepared in English & then translated into Amharic. Pretest was done on 10% of the sample size in non-selected health center to check for consistency and reliability. Appropriate correction was made on questions which have a vague response afterwards.

Data processing and analysis

The collected data was checked for the completeness and consistency by group members and advisors. EPI-info, SPSS version 20 was used for data entry and analysis. After cleaning the data, frequencies and percentages was calculated to all variables which would relate to the objectives of the study. Odds ratio with 95% confidence interval was computed to assess the presence and degree of association between dependent and independent variables, and to assess the separate effects of the variables. Finally, the result was presented using text, tables and figures.

Result

A total of 362 pregnant women responded to the questionnaire which makes the response rate of 100%. The majority group 109 (30.1%) were between 25-29 years of age and the minorities 10(2.8%) were between ≥ 40 years of age. The mean age of the respondents was 26.5 ± 6.1. Among the respondents the majority, 306 (84.5%), of respondents were married. Concerning age at first marriage, 136 (37.6%) married at the age of 18-22 years and 24 (6.6%) married by the age of 28-32 years. The mean age at first marriage was 21.4 ± 5.1 (Table 1).

Character	Category	Frequency	Percentage (%)
Age	15-19	35	9.7
	20-24	71	19.6
	25-29	109	30.1
	30-34	108	29.8
	35-39	29	8
	≥ 40	10	2.8
Marital status	Married	306	84.5
	Single	37	10.2
	Divorced	15	4.1
	Widowed	4	1.1
Age at first marriage	13-17	70	19.3
	18-22	136	37.6
	23-27	102	28.2
	28-32	24	6.6
Education level	Illiterate	51	14.1

	primary school	56	15.5
	Secondary school	78	21.5
	Preparatory	20	5.5
	Diploma and above	157	43.4
Religion	Orthodox	138	38.1
	Protestant	131	36.2
	Muslim	66	18.2
	Others	27	7.5
Occupation	Students	51	14.1
	Farmer	9	2.5
	civil servant	83	22.9
	daily labor	19	5.2
	Unemployed	94	25.9
	Merchant	96	26.5
	Others	10	2.8
House hold income per year	6000-12000	45	12.4
	12001-24000	50	13.8
	24001-60000	136	37.6
	>60000	131	36.2
Total		362	100

Table 1: Socio-demographic and economic characteristics of mothers attending ANC clinic at selected public hospitals in Hawassa City, SNNPR, Ethiopia, 2016 (n=362).

Prevalence of unplanned pregnancy among 362 ANC attending pregnant women was 122 (33.7%) and the rest 240 (66.3%) clients reported as wanted (Figure 1).

Reasons for unplanned pregnancy

The major reason for unplanned pregnancy was to have gap between births, 51 (41.8%) and the least one is rape 2 (1.6%) (Table 2).

Reasons for unwanted pregnancy	Frequency	Percent
To have gap between births	51	41.8
Don't have enough money to take care of the baby	37	30.3
Others	10	8.2
Divorced	9	7.4
Still in a school	8	6.5
Fear of being out casted	5	4
Raped	2	1.6
Total	122	100

Table 2: Reasons for unplanned pregnancy among mothers attending ANC clinic at selected public hospitals in Hawassa City, SNNPR, Ethiopia, 2016 (n=362).

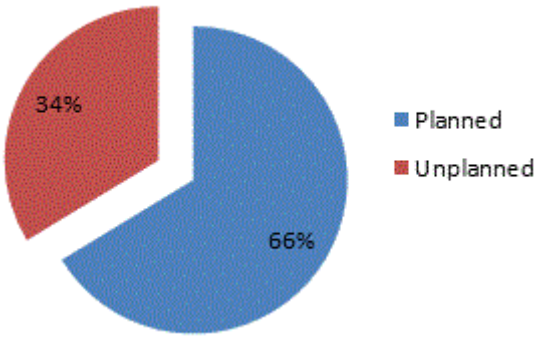

Figure 1: Prevalence of unplanned pregnancy of mothers attending ANC clinic at selected public hospitals in Hawassa City, SNNPR, Ethiopia, 2016 (n=362).

Factors associated with unplanned pregnancy

On the bivariable logistic regression analysis age, education level, occupation, ever use of family planning and marital status are significantly associated with unintended pregnancy at p<0.05. In the multivariate model of logistic regression, variables which had significant level of p<0.25 were entered in to the model. The Adjusted OR (AOR) findings showed an association on variables age, educational level, and occupation, ever uses of FP and marital status of the study participants. As shown in the table below, the odds of unplanned pregnancy was higher by 3.7 times among the age group of 15-19 and higher by 0.07 times among the age category 35-39 compared to the age categories greater than 40 (AOR=3.68; 95% CI, 1.03-13.17 and AOR=0.07; 95% CI, 0.01-0.41) with p-value of 0.045 and 0.003 respectively.

The odds of unplanned pregnancy was higher by 4.6 times among illiterate compared to diploma and above educational level (AOR=4.550; CI 95% 1.78-11.63) at p-value of 0.002. Concerning occupation, the odds of unplanned pregnancy was higher among others as compared to unemployed by 40 times (AOR=0.025; CI, 0.004-0.16) at p-value of 0.001 and regarding marital status, respondents who are singles are at more risk for unplanned pregnancy compared to divorced and widowed (AOR=92.96; CI, 2.8-31.05) at p-value of 0.01. Also among FP users and non-users, the non-users are more likely to experience unplanned pregnancy by 7 times more (AOR=0.144; CI, 0.07-0.30) at p-value of 0.001 (Table 3).

Variables	Category	Unplanned pregnancy		COR (95% CI)	AOR (95% CI)	P-value
		Yes	No			
Age	15-19	15	20	4.89(1.67-14.28)	3.68(1.03-13.16)	0.045*
	20-24	54	17	0.85(0.280-2.58)	0.84(0.23-3.06)	0.79
	25-29	88	21	1.52(0.47-4.94)	2.32(0.58-9.21)	0.23
	30-34	70	38	0.18(0.04-0.75)	0.12(0.02-0.80)	0.03
	35-39	10	19	0.115(0.03-0.44)	0.07(0.013-0.41)	0.003*
	≥ 40	3	7	1	1	1
Education	Illiterate	28	35	8.88(4.42-17.83)	4.55(1.78-11.63)	0.002*
	Primary	18	24	3.11(1.59-6.06)	0.92(0.36-2.33)	0.86
	Secondary	55	23	2.01(1.08-3.76)	0.44(0.17-1.09)	0.07
	Preparatory	16	7	2.79(1.05-7.42)	0.15(0.02- 0.88)	0.036*
	Diploma and above	103	33	1	1	1
Occupation	Student	25	26	1.0(0.26-3.88)	0.51(0.09-2.71)	0.43
	Farmer	3	6	0.28(0.04-2.11)	0.08(0.001-1.08)	0.06
	unemployed	57	37	0.04(0.01-0.22)	0.03(0.004-0.166)	0.00*
	Daily labor	2	17	3.50(.66-18.49)	1.38(0.19-9.67)	0.74
	merchant	76	20	0.79(.22-2.19)	0.43(0.09-1.91)	0.26
	Civil servant	71	12	0.54(.14-2.04)	0.28(0.06-1.31)	0.11
	Other	5	5	1	1	1

Annual Income	6000-12000	16	29	6.54(3.08-13.91)	0.60(0.16-2.28)	0.45
	12001-24000	35	18	2.16(1.09-4.25)	0.87(0.32-2.37)	0.79
	24001-60000	110	36	0.91(.52-1.56)	0.74(0.35-1.55)	0.42
	>60000	79	39	1	1	1
Marital status	Married	227	79	1(0.1-9.79)	0.94(0.05-16.99)	0.96
	Single	4	33	51(3.51-74.13)	92.95(2.8-31.05)	0.01*
	Divorced	7	8	6(0.49-73.45)	7.64(.32-18.07)	0.21
	Widowed	2	2	1	1	1
Ever use of FP	Yes-283	190	93	1		1
	No-79	50	29	0.34(0.20-0.57)	0.14(0.06-0.3)	0.00*
EC use	Yes-95	71	24	1	1	1
	No-267	169	98	0.47(0.78-2.09)	0.93(0.45-1.91)	0.84
Ever had abortion	Yes-75	21	54	1.52(0.9-2.55)	1.21(0.58-2.5)	0.61
	No-287	219	68	1	1	1

Table 3: Bivariable and multivariable logistic regression analysis for variable associated with unplanned pregnancy among mothers attending ANC clinic at selected public hospitals in Hawassa City, SNNPR, Ethiopia, 2016 (n=362) [*=Significant (≤ 0.05); **=Highly significant (≤ 0.001); EC: Emergency Contraceptive; FP: Family Planning].

Discussion

In this study, the prevalence of unplanned pregnancy was (33.7%). This finding is consistent with the facility based study done in Hosanna town (34%), Harar town (33.3%) and Ethiopian national study, EDHS 2011 (29%). However, it is higher than the facility based study done in Bahir Dar city with Prevalence of 26%. But it is less than the facility based study done in Addis Ababa (38.7%) and West Wellega (36.5%) [7-12]. The variation might be due to a difference in socio-demographic and cultural characteristic of study participants in the study area. Our study also reveals the relation of age with unplanned pregnancy in the age category of 15-19 and the age group 35-39 more likely experience compared to the old ages. Compared to this several studies showed that adolescents were more likely than older women to have had mistimed pregnancy [11] Also according to studies done in Nepal, 35% of women reported to have their recent pregnancy unintended and among those pregnancies, 77% of the women were aged 35 and above [12]. Illiteracy has an association with unplanned pregnancy as compared to diploma and above level of education (AOR=4.50; 95% CI, 1.78-11.63, p-value-0.002).

Related to this study, other studies done in Southern and Eastern Ethiopia showed that as the education level increases the rate of unplanned pregnancy decrease and reduces the chance of discontinuity of contraceptive. Even little advance in education improves women's decision making power leading to avoidance of unplanned pregnancy [13,14]. In terms of occupation, other types of work has an association with unplanned pregnancy; which is 40 times more likely to experience unplanned pregnancy compared to unemployment (AOR=0.025; 95% CI, 0.004-0.16) at p-value of 0.001. Similarly, the study done in Addis Ababa shows the odds of unintended pregnancy among own business makers is about 4 times more likely to experience unplanned pregnancy compared to house wives (AOR=3.86% CI;1.07,13.91) [10]. However, in most studies, unemployed mostly may have low social interaction and dependency nature of their behavior, so they may face casual sex followed by unplanned pregnancy. The present study also shows the significant result in non-users of FP with unplanned pregnancy (AOR=0.14; 95% CI, 0.07-0.30) at p-value of 0.001. Related to this the study done in West Wollega, Ethiopia, shows age of respondents, total birth, ideal number of children, husband's disagreement to limit family size, family planning usage and knowledge level of respondents were significantly contributing to unplanned pregnancy [15].

Conclusion and Recommendation

More than one quarter (33.7%) of the study participants had unplanned pregnancy experience. This is high as compared to the national study of unplanned pregnancy which is 29% (EDHS, 2011). This indicates unplanned pregnancy is one of the major reproductive health problems in the study area. In addition to this, 21.8% of the respondents were non-users of family planning. The results of this study showed that many factor were linked to affect the occurrence of the event including age, education status of women, occupation, marital status and ever use of family planning. The main reasons stated by study participants for unplanned pregnancies were do not have enough money to take care of the baby, to have gap between births, divorced, still in school, fear of being out casted and Rape.

Providing information and counseling about each contraceptive method to make informed choice and correct method use, and strengthening family planning method among client in need of the service is recommended. Reproductive health programs focusing on promotion of long term family planning methods by provision of effective IEC and counseling, and encourage men's participation with their partners in fertility issues and using contraception; again, women

empowerment should be emphasized. In addition, open discussion with their spouses on fertility issues and using contraception methods is mandatory. Furthermore, it is recommended that attempts should be made reducing unplanned and unwanted pregnancy by conducting further robust study.

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Ethics Statement

Ethical clearance was obtained from ethical review board of Hawassa University, College of Medicine and Health Sciences. After thoroughly discussing the ultimate purpose and method of the study, a written consent was sought from each respondent. The respondents were informed that their inclusion in the study is voluntary and they are free to withdraw from the study if they are not willing to participate. If any question they do not want to answer they have the right to do so. Participants were guaranteed confidentiality of the information collected. Anonymity was considered to ensure confidentiality of respondents.

Author's Contributions

All authors contributed toward data analysis, drafting and critically revising the paper and agree to be accountable for all aspects of the work.

Disclosure

The authors report no conflicts of interest in this work.

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