

## Prevalence of Unwanted Pregnancy and Associated Factors among Women in Reproductive Age Groups at Selected Health Facilities in Addis Ababa, Ethiopia

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### Abstract

**Background:** Unsafe abortions resulting from unintended pregnancies denote an important public health challenge throughout the world. Although various strategies have been used to address this problem unsafe abortion from unwanted pregnancy remained the cause for a significant number of maternal morbidity and mortality.

**Objective:** To assess the prevalence of unwanted pregnancies and factors associated with unwanted pregnancies.

**Methodology:** A facility based cross-sectional study was conducted to select randomly 349 women of reproductive age from five hospitals providing antenatal care in Addis Ababa. Data were collected using standardized pretested interviewer administered questionnaire. Logistic regression was used to analyze the association between the dependent and independent variables.

**Result:** A total of 333 reproductive age group females participated in the study making the response rate 95.4%. A total of 126 (37.8%) and 50 (39.6%) respondents had unwanted pregnancy and induced abortion at some point in their lives. Marital status and number of sexual partner were significantly associated with unwanted pregnancy with AOR [1.783 (1.036, 3.068), 11.355 (5.106, 25.253)] respectively.

**Conclusion:** The prevalence of unwanted pregnancy and induced abortion were high, and most of the induced abortion was the result of unwanted pregnancy. This study has implication that comprehensive approaches should be emphasized to increase awareness, access and use of family planning methods.

**Keywords:** Reproductive age; Pregnancy; Family planning; Antenatal care; Mortality

### Introduction

Unintended pregnancy is an important public health issue in both developed and developing countries because of its negative association with social and health outcomes for both mothers and children. Unintended pregnancy is a pregnancy that is either mistimed or unwanted at the time of Conception. It is one of the leading factor contributing to high level of maternal and child morbidity and mortality [1]. Although several international declarations were passed to address the problem, many women in sub-Saharan Africa are still suffering from unwanted pregnancies and its resultant unsafe abortion [2]. Even though, goal 5 of the millennium development is targeted to reduce maternal deaths by three-fourth by 2015 Ethiopia has the fifth largest number of maternal deaths in the world and the maternal mortality was estimated to be 676 deaths per 100,000 in the year 2011 [3].

The Ethiopian Demographic Health Survey report showed that 16.2% and 18.7% of women reported that their last pregnancy was unwanted and mistimed; respectively. Many of the mistimed

pregnancies in Ethiopia occurred among women less than 30 years of age [4]. Unintended pregnancies is higher among women who were unmarried, lower economic status, at an early or late age of reproductive life, among those not using contraceptives consistently and attending formal education [5]. Unintended pregnancy has become a public concern and is capturing a great deal of attention because of its high prevalence rate in continent. Unplanned births as those occurring two or more years sooner than desired, or not wanted at all. Recently, unintended pregnancy in Africa was reported to be 57 per 1000 women. The observed intended and unintended pregnancy rates are highest in Africa (136 and 86 respectively) than in other regions [6]. 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. This goes together with a low contraceptive prevalence rate in the less developed countries when compared with developed countries [7].

It is shown that out of 210 Million pregnancies occurring in the world annually, about 79 million are estimated to be unintended of these 50% end up in abortion. It is also shown in every pregnancy worldwide are unplanned and reported that 10-14% of young unmarried women around the world has unwanted pregnancy. In developing countries more than one-third of all the pregnancies are

considered unintended and about 19% will end up into abortion, which are most often unsafe accounting for 13% of maternal deaths globally [8]. Ethiopia where the present study is taking part is one of the African countries where unwanted adolescent pregnancy is a health challenge. Population under 18 is about 39 million of the total population estimated to 85, 2 million and 24% of girls are giving birth before the age of 18 [9]. Several studies have shown that mean age of adolescents to become pregnant in Ethiopia rural area is 16 years. The fertility of Ethiopia women is among the highest in Sub-Saharan Africa. Ethiopian woman have an average of 5.9 children each. The high total fertility rate for women has led to high population growth rate of 3.2% per year [10]. Even though, evidences on the prevalence of unwanted pregnancies and induced abortion and identifying factors that are responsible for unwanted pregnancies and induced abortions are essential in improving reproductive health service to women information regarding this is hardly available. Therefore, it is the purpose of this study to assess the prevalence of unwanted pregnancies and induced abortion and recognizing the determinant factors of unwanted pregnancies.

## Methodology

### Study setting and design

Ethiopia has 9 regional states and 2 administrative cities, of which Addis Ababa is the largest and capital of city of the country. It is situated in central part of Ethiopia at an altitude of about 2440 m (about 8000 ft.) above sea level with "dega" climatic condition. The city has 10 sub-cities and 203 kebeles (the smallest administrative unit). According to the 2007 census by Central Statistic Authority (CSA) the city has a projected population of 3,384,569. With regard to the ethnic composition of the population of the city, 48% were Amhara, 19.2% Oromo, 13.5% Gurage and 7.6% Tigrie. The religious composition of the population showed the overwhelming majority to be Orthodox Christian (81.8%), followed by Muslim (12.7%). Both the population of the city and the service-giving organizations like schools and health facilities are not evenly distributed among the sub cities. The city holds 308 primary and 50 secondary schools. The secondary schools are broadly divided into 29 governmental and 21 non-governmental. The gross enrollment ratio of both sexes in secondary school is estimated to be 48.1%. There are 37 hospitals (two non-governmental, twelve governmental, and twenty three private hospital), 29 Health center, 116 private not for profit and 357 private for profit clinics in Addis Ababa [11]. A facility based cross-sectional study was carried out using quantitative method in Addis Ababa from March-April 2014.

### Population and sampling

The source population for the study was all reproductive age group of women who live in Addis Ababa city. All pregnant women currently attending ANC at selected health facilities in Addis Ababa were study population.

### Sample size estimation

To determine the sample size, a single population proportion formula using a prevalence of unintended pregnancy at 35% [1], a confidence level of 95%, and a 5% degree of precision, were used.

$$n=(Z\alpha/2)^2Pq/d^2=349$$

Where: n=sample size; Z=standard normal deviate, (a constant set at 1.96 on the basis of using the 95% confidence interval for estimation); P=Prevalence of unintended pregnancy; d<sup>2</sup>=margin of error (5%) and q=1-P

### Sampling technique

The study was conducted in selected governmental hospitals providing ANC services in Addis Ababa. (Black lion specialized hospital, zewditu memorial hospital, Ghandi memorial hospital, Yekatit 12 hospital and St. Paul specialized hospital). All charts of antenatal attendees appointed for the day was reviewed. From those study participants were selected using systematic sampling at every third interval (k=3). The same procedure was followed each day until the sample size is reached.

### Study variables

- **Dependent variables:** Unwanted pregnancy and Induced abortion.
- **Independent variables:** a. Socio-demographic characteristics: Age, marital status, occupation and level of education; b. Sexual factors: Number of sexual partners, exposure to FP information and ever use of contraceptives.

### Data collection procedures

Data was collected using interview based semi structured questionnaire. It was prepared in English and then translated to Amharic and then translated back to English and finally administered in Amharic. Three nurses working at selected health facilities were recruited for data collection. One day training was given to data collectors on the objectives of the study, the contents of the questionnaire, and particularly on issues related to the confidentiality of the responses and the rights of respondents.

### Data quality management

One week prior to data collection a pre-test was conducted on 5% of the sample size on other health institution out of selected health facilities. Data collected was cross checked, edited, coded and entered to a computer using EPI info and analyzed using SPSS. Depending on the result of the pretest, correction and modification was made on the questionnaire before applied on the study population. The principal investigator supervised data collection processes and checked for completeness of the data and correctness of the data collection procedure.

### Data processing and analysis

Data from the questionnaire was cleaned and verified to minimize entry errors, outliers and missing values. Responses from questionnaire were coded and the codes was saved in the code book and used during the interpretation. Collected data was entered into the computer using EPI info. Data cleaning was done to check for the forgotten entries, consistency and outliers. Data analysis was done using Statistical Package for social scientist (SPSS) software. Frequencies of variables were generated; Tabulation and percentages was used to illustrate study findings. Logistic regression analysis was used to analyze the association between the dependent and independent variables

### Operational definitions

- Unwanted pregnancy: Pregnancy that is either mistimed or unintended.
- Induced abortion: Deliberative termination of pregnancy before 28 weeks of gestation.

(standard deviation=2), the mean age of attaining menarche was 15 years (Standard deviation=2), and the mean age for the first sexual intercourse was 18 years (Standard deviation=2) years with a large proportion 209 (62.8%) aged 20-24 years. Of all 160 (48%) females had secondary education and 93 (27.9%) had primary education, while 50 (15%) had no formal education.

### Results and Discussion

#### Socio-demographic characteristics

Out of 349 study participants a total of 333 reproductive age group females participated in the study. The respondents mean age was 23

Of the respondents, 180 (54.1%) were single and 153 (45.9%) were married. In terms of occupation, 68 (20.42%) respondents were students, 62 (18.6%) unemployed and 64 (19.2%) were into business. Of the total respondents, 144 (43.2%) were orthodox followed by protestants 91 (27.3%) (Table 1).

Variables		Number	Percentage
Age	20-24	209	62.8
	25-29	124	37.2
	Mean age (SD=23 ± 2)		
Level of Education	No formal education	50	15
	Primary school	93	27.9
	Secondary school	160	48
	College/university	30	3.6
Occupation	Student	245	73.6
	Civil servant	35	10.5
	Business	28	8.4
	Others	25	7.5
Religion	Orthodox	144	43.2
	Muslim	81	24.3
	Protestant	91	27.3
	Others	17	5.2
Marital Status	Married	153	45.8
	single	180	54.2
Living with	Both parents	51	15.3
	Husband	153	45.8
	Mother only	32	9.6
	Father only	32	9.6
	Relative	63	18.91
	Alone	2	0.6

**Table 1:** Socio-demographic characteristics of study population, 2014, Addis Ababa.

#### Knowledge and practice on contraceptive use

Out of all the study respondents, all of them 333 (100%) have heard of the FP planning information, the information was mostly received from radio/newspaper/television 224 (67.3%) and the FP method that was mentioned by the majority was condom (98.8%) followed by pills

314 (94.3%). Of the total respondents, those who reported to have ever used contraceptives 189 (57.1%) were using injectable followed by pills 161 (48.3%). When asked why they are not using contraceptives, majority of them reported that they fear side effects of contraceptives 120 (65.9%).

Majority (76.3%) of the study respondents have heard of emergency contraceptives and used the emergency contraceptives (57.1%). About 125 (37.5%) of the respondents mentioned that Emergency contraceptives should be used within 48 hours after sexual intercourse followed by within 72 hours while only 42 (12.6%) reported that it should be used within 24 hours after sexual intercourse (Table 2).

Variables		Number	Percentage
Family planning awareness	Pills	314	94.3
	Condom	329	98.8
	Injectable	209	62.76
	IUCD	124	37.23
	Implants	205	61.56
	Others	4	1.2
Place to get FP information	Family	48	14.4
	School	62	18.6
	Church/mosque	16	4.8
	Radio/Newspaper/TV	224	67.3
	Health facility	205	61.6
FP used by the respondents	Pills	161	48.3
	Condom	114	34.2
	Injectable	189	57.1
	Implants	15	4.5
Reason for not using contraceptive	Lack of knowledge	79	23.7
	Fear of side effects	115	34.5
	Religious issue	30	9
	Contraceptives not available	32	9.6
	Others	13	3.9
Heard of EC	Yes	254	76.3
	No	79	23.7
Use of EC	Yes	189	57.1
	No	144	42.9
Effective use of EC	Immediately after sex	81	24.3
	Within 24 hours	42	12.6
	Within 48 hours	125	37.5
	Within 72 hours	85	25.5

**Table 2:** Knowledge and practice of respondents on contraceptive use.

### Prevalence of unwanted pregnancy and induced abortion

More than a quarter 126 (37.8%) of respondents reported having experienced an unwanted pregnancy at some point in their lives. Of these 50 (39.6%) were induced abortion (Figure 1).

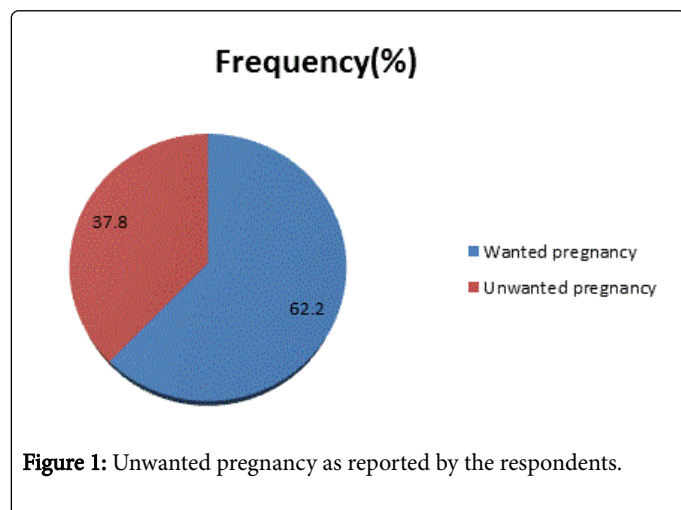
### Factors related with unwanted pregnancies and induced abortion

#### Factors that influence having unwanted pregnancies

Majority of the respondents who did not want pregnancies were still in school, 83 (37.2%) followed by 75 (33.6%) who did not have money to take care of the baby (Figure 2).

### Factors that influence having induced abortions

Most of the respondents mentioned that the reason for not wanting the pregnancy was that they were single 62 (31.9%), followed by still in school 52 (26.8%) as a reason why they ended up into having induced abortion (Figure 3).



### Independent predictors of unwanted pregnancy

In-case of marital status single women were more likely in having unwanted pregnancies with COR [1.937 (1.206, 3.11)] as compared to their counterparts. However, regarding level of education and occupation, the association was not statistically significant for unwanted pregnancy. The study showed that females who had more than one sexual partner were more likely to have unwanted pregnancy compared to those who had one sexual partner COR 10.614 (4.915, 22.920). As the study showed use of contraception had no significant association with unwanted pregnancy (Table 3).

The multivariate analysis of unwanted pregnancy indicated that marital status and number of sexual partner were significantly associated with unwanted pregnancy, AOR [1.783 (1.036, 3.068), 11.355 (5.106, 25.253)] respectively. The study revealed that the proportion of unwanted pregnancy and induced abortion among

reproductive age group is very high; as it was reported 37.8% of all the females had unwanted pregnancies. Most of these unwanted pregnancies ended up with abortion with the proportion of 50 (39.6%).

This coincides with what have been reported from other studies done in South Ethiopia at Hossaina town which showed that 34.4% of all pregnancies among reproductive age groups were unintended [11]. There are several reasons for a woman to end up having unwanted pregnancy; it could be they are still in school, financial problem, family issues as well as culture and norms in the community. In this study it was found that most of the females who had unwanted pregnancy were still in school (37.2%) followed don't have enough money (33.6%).

This result is consistent with the study done in Tanzania among female youths which showed that majority of the youths who had unwanted pregnancy were still in school (47%) followed by the financial reason, as they mentioned that they didn't have enough money to take care of the baby (40%) [12] (Figure 2).

The knowledge of family planning method was 100% where as ever use of any family planning method was 21.3%. The most mentioned method that was reported to be used was injectable (57.1%) followed by pills (48.3%). Despite having heard and use of FP method still 37.6% had unwanted pregnancy. This could be explained by the method failure or incorrect information on contraceptive use; this coincided with previous literature whereby it was found that only 13 percent of married adolescent age 15-19 use contraception in Sub-Saharan Africa [13], the reason could be lack of knowledge and skill in using contraception.

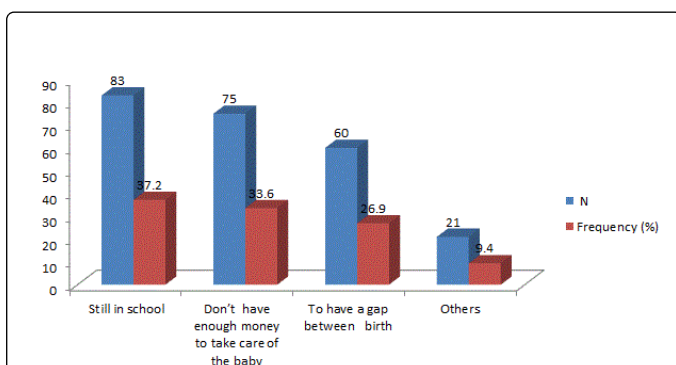
Awareness on emergency contraceptives could also play a big role in the reduction of unwanted pregnancies among reproductive age groups, but still this was found as a gap as most of the women who were aware of emergency contraceptives (79%), even didn't have actually used it (23.7%). In contrast with other studies, this study showed that there was no significant association between the level of education and unwanted pregnancy.

This may be due to high number of study participants (48%) had secondary education and at least enrolled to primary education (29.8%). For example a study done in Kenya showed that women with at least secondary education had their first sexual intercourse delayed by at least three years [14] (Figure 3).

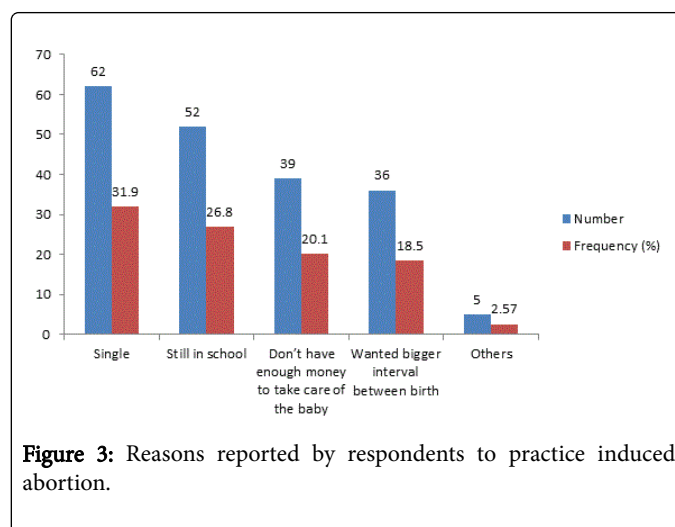
Variables	Unwanted pregnancy		COR (95% CI)	AOR (95%CI)
	Yes	No		
Educational status				
No formal education	17	33	1	1
Primary school	30	63	1.065 (0.513,2.208)	1.020 (0.438, 2.379)
Secondary & above	62	128	1.064 (0.550,2.056)	1.435 (0.401, 5.130)
Marital status				
Single	71	109	1.937 (1.206,3.11)	1.783 (1.036, 3.068)
Married	39	114	1	1
Occupation				

Student	83	162	1	1
Civil servant	14	21	0.759 (0.367,1.570)	1.447 (0.643, 3.253)
Business	8	20	1.265 (0.534,2.996)	1.687 (0.618, 4.604)
Others	5	20	2.025 (0.734,5.589)	3.263 (1.079, 9.865)
Number of sexual partner				
One	52 (34.0)	99 (66.0)	1	1
More than one	58 (31.90)	124 (68.1)	10.614 (4.915,22.920)	11.355 (5.106, 25.253)
FP use				
No	24	48	1.017 (0.557, 1.707)	1.829 (.940, 3.561)
yes	86	175	1	1

**Table 3:** Multivariate analysis for unwanted pregnancy.



**Figure 2:** Reasons for unwanted pregnancies as reported by the respondents.



**Figure 3:** Reasons reported by respondents to practice induced abortion.

In this study, occupation was not associated with prevalence of unwanted pregnancy. This may be due to high number of study participants had their own job and civil servants. This is contrary to many other studies on the correlates of unintended pregnancy [15,16]. The study showed that females who had more than one partner were more likely to have unwanted pregnancy than those who had one partner.

This finding is consistent with study conducted at Tanzania [12]. Most of unwanted pregnancy induced abortions were being conducted by a skilled health provider, at the Public clinic (43.8%), this could explain the response by the majority of the respondents who reported that method used for the induction of abortion was drug (61.46). This finding is similar with another study done in Ethiopia that showed most of abortions were reported to be conducted at the health facilities by the health care provider [17].

### Ethical Considerations

Ethical clearance for the study was obtained from the IRB of department of nursing and midwifery, College of Health Sciences, AAU, Formal letters were written to all concerned authorities and permission was secured at all levels. Informed verbal consent was obtained from each respondent after explaining the purpose and procedure of the study. No name or other identifying information was included in the instrument. Considering the sensitivity of this research, all the basic principles of human research ethics (respect of persons, beneficence, voluntary participation, confidentiality and justice) was respected.

### Conclusion

The prevalence of unwanted pregnancy and induced abortion were high, and most of the induced abortion was the result of unwanted pregnancy. Marital status and number of sexual partner were significantly associated with unwanted pregnancy. Most reasons that were given by the females for having unwanted pregnancies and

induced abortion were that they were still in school and they don't have enough money to take care of the baby respectively.

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