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Proportion of Unsafe Abortion and Associated Factors among Women Who Need Abortion Services in Health Facilities of Dessie Town, Ethiopia



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ABSTRACT

Unsafe abortion is terminating of pregnancy performed by persons lacking the necessary skills and in environment with poor minimal medical standards, or both. It is a public health concern in many parts of the world, especially in sub-Saharan countries. Regardless of legal status, abortion occurs all over the world, and nearly half of them are performed by an unskilled practitioner or in less than sanitary conditions, or both. But there is no information about the proportion of unsafe abortion among women who need abortion services and factors associated with unsafe abortion in the case of south Wollo. So the objective of present study was to determine proportion and factors associated with unsafe abortion among women who seek post abortion services in health facilities of Dessie town. Method: Institution based cross-sectional study was conducted among women who seek abortion care services in health facilities of Dessie town. Systematic random sampling technique was employed to recruit a total of 360 study participants. For data collection, a structured and pretested questionnaire was used. Descriptive statistics were done to characterize the study population using different variables. Bivariate and multiple logistic regression models were fitted to control confounding factors. Odds ratios with 95% confidence intervals were computed to identify factors associated with unsafe abortion. Results: This study revealed that 45 % of women who seek abortion care services had unsafe abortion. Almost all women use post abortion contraception to reduce the occurrence of unwanted pregnancy. Respondents who had unintended pregnancy had four points six times more likely to have unsafe abortion (AOR= 4.60, 95% CI 2.418-8.734) than women who had intended pregnancy. On the other hand, women who had no previous complication were 6.5 times more likely to have unsafe abortion than who had experience previous pregnancy related complications (AOR= 6.48, 95% CI 1.207-34.77). Conclusion and recommendation: In this study, about 45% the study subjects were undertaken unsafe abortion despite the availability of safe abortion services in the town. Unintended pregnancy, single and no previous pregnancy related complications were the main predictors that increase likelihood of unsafe abortion among women who seeks post abortion care, information education communication should be delivered about the effect of unsafe abortion, the availability of safe abortion services and the legal ground of abortion especial for teens.

INTRODUCTION

Abortion is termination of pregnancy before viability. It can be spontaneous or induced. The term abortion most commonly refers to the induced abortion of a human pregnancy, whereas, spontaneous abortions are usually termed miscarriages. Induced abortion is usually defined as pregnancy termination prior to 20 and 28 weeks for developed and developing countries respectively (1-2).

According to World Health Organization (WHO), unsafe abortion is defined as a procedure for terminating an unwanted pregnancy either by people lacking the necessary skills or in an environment lacking minimal medical standards or both (2).

Every day, approximately 1000 women die from preventable causes related to pregnancy and pregnancy outcome of which 99% occurred in developing countries (3-4).

Abortion is a very common experience in every culture and society (1-6). Out of the 210 million pregnancies that occur each year globally, 46 million pregnancies end up in induced abortion and 19 million women experience unsafe abortions annually (5, 6).

Relatively there is high rate of unsafe abortion in Africa (28 unsafe abortions per 1000 reproductive age women). In the continent, about 14 % of maternal deaths are attributed to unsafe abortion (1). Annually, about two million women in Africa are hospitalized due to complications resulting from unsafe abortions (2). Severe hemorrhage, infections, trauma, and renal failure are common problems related to unsafe abortion (5, 7).

Recent changes in abortion law in Ethiopia are believed to pave the way for access to safe abortion services and subsequently, reduce the burden of unsafe abortion and its complications and maternal mortality and morbidity (8). However, almost six in 10 abortions in Ethiopia are unsafe (9).

There are different studies on the legalization of abortion, post abortion family planning in the country. But there is no study on the proportion of unsafe abortion in health facilities of the town among post abortion care seeking women. The finding is important to take reproductive health interventions to reduce the proportion and complications of unsafe abortion by identifying different factors responsible for unsafe abortion. It is also important to reduce prevalence of abortion by providing postabortion family planning. It was, therefore,

necessary and timely to study the proportion and factors associated with unsafe abortion in health facilities of the town.

METHODS

The study was conducted in Dessie town which is a city administration and the capital of south Wollo zone. The town is located at a distance of 401 km from Addis Ababa and at 488 km from the capital city of the region (Bihar Dar). The town has 6 hospitals (2 governmental and 4 private), 8 health centers and two nongovernmental organization clinics providing safe abortion and post abortion care services. There are also private medium clinics and drug stores in the town. Institution based cross sectional study was conducted from April 1/2016 - May 10/2016. Women who visited Dessie referral hospital and merry stops clinic Dessie branch were included in the study and those who got services during the data collection period were included in the actual study. Women who have hearing loss and difficulty of communication were excluded from the study.

The sample size for the study was calculated using a single population proportion formula with the following assumptions: a 95% confidence interval (Z value of 1.96), 5% marginal error and 30.8% proportion of induced abortion in Gonder medical science hospital (10). The final sample size determined by the formula $n = (Z_{\alpha/2})^2 P (1-P) / d^2$ with an assumption of 10% nonresponse rate that gives a sample of 360.

Dessie referral hospital and merry stops international clinic Dessie branch were included in the study purposely based on last year abortion care services delivery. Women who visited the two sites for abortion services were included until adequate sample size was obtained. Finally, 210 and 150 clients were taken from merry stops international Dessie branch and Dessie referral hospital respectively.

According to this study, abortion is measured when initiation of termination of abortion is done by the women by herself with taking different initiating things and/or by traditional healers, by anyone outside of the health facilities as unsafe abortion and as safe abortion when initiation is in health facilities medical or surgical method.

Tool for data collection was developed by reviewing similar literatures and structuring according to the local contexts. The questionnaire was prepared in English and translated into the local language (Amharic) and back to English to see its consistency. The questionnaire

contains socio- demographic, reproductive history and complications encountered during the current abortion. Two BSc nurses participated in the data collection and one master of public health was recruited as supervisor. To assure the quality of data, one day training was provided for data collectors and supervisor about, objective of the research, how to fill the questionnaire and client approach. Pre test was done on 30 clients from family guidance association of Ethiopia Dessie branch and some adjustment was done on the tool based on the result. The filled questionnaires were check on daily basis for completeness by supervisor and principal investigator.

The collected data were coded and entered by using Epi DATA version 3.1 then exported to SPSS version 20.0 for data processing and analysis. Descriptive statistics like; proportion, mean and standard deviations were done and presented in tables. To identify factors which were predictors for unsafe abortion, Bivariate and multivariate logistic regression analysis were computed. Odds ratio along with the 95% CI was estimated to ascertain the association between covariates and unsafe abortion. Covariates that have P-value of <0.3 at the bivariate analysis were included in the multivariate logistic regression to control all possible confounding factors. For all statistical tests, P-value ≤ 0.05 was used as a cut-off point for statistical significance.



Ethical clearance was obtained from the ethical clearance committee of Wollo University, College of Medicine and Health Science. Official consent letter was issued from Dessie town administrative health Office. The necessary explanation about the purpose of the study and about its procedure was done and verbal consent was obtained from each respondent. To assure the confidentiality of the response, anonymous interview was conducted.

RESULTS

Socio-Demographic characteristics

A total of 360 respondents were included in the study. The ages of the respondents range from 15 to 49 with mean of 33 and standard deviation of 14.7. Majority (72.8%) of respondents were Amhara by ethnicity. Muslim and Orthodox Christians were common religions of the respondent's (46.9%), (38.6%) respectively. 81.9% and 46.9% of clients were urban dwellers and married respectively (table 1).

Proportion of unsafe abortion and Reproductive histories

One hundred twenty one (33.6%) of the respondents had previous history of abortion. One hundred sixty two (45.0%) of women had unsafe abortion during the current abortion and one hundred twenty one (33.6%) face abortion related complications. Sixty seven (53.4%) of women had experienced bleeding. Almost all (98.1%) of women were take postabortion family planning to prevent unwanted pregnancy (table 2).

Factors associated with unsafe abortion

The results of bivariate and multivariate analysis between unsafe abortion and selected independent factors are presented in Table 3. Accordingly, the following factors were independently associated with unsafe abortion in the final multiple variable logistic regression model.

Respondents who had unintended pregnancy had four points six times more likely to have unsafe abortion (AOR= 4.60, 95% CI 2.418-8.734) than women who had intended pregnancy. On the other hand, women who had no previous complication were 6.5 times more likely to have unsafe abortion than who had experience previous pregnancy related complications (AOR= 6.48, 95% CI 1.207-34.77).

The other variables like age, marital status, educational status, history of abortion and gravidity were not statistically significant with unsafe abortion among women who seeks abortion care.

DISCUSSION

In this study, proportion of unsafe abortion is 162 (45%). Other studies in Ethiopia show high prevalence of unsafe abortion. For example 56% women in Batu town experiences unsafe abortion (11). In Wolaita Sodo University students (50%) of abortions are unsafe (12). In northwest Ethiopia, 55% of women induced abortion at their home (13). The discrepancy may be time, study setting and study population difference. The finding is higher than the study done in Nigeria (20%) of the women induced abortion by themselves (14). The discrepancy could be knowledge about legalization of abortion, accessibility and availability of safe abortion services for women. The finding of this study strongly imply that despite policy changes to liberalize abortion in Ethiopia, to reduce unsafe abortion and subsequent

maternal mortality and morbidity, unsafe abortion remains to be a major public health problem affecting significant number of women in the country.

Almost all (98.1%) of women were take postabortion family planning to prevent unwanted pregnancy. The finding is higher (47.5%) than previously study done in Dessie town (15). The difference could be due to time, the previous study includes all health facilities. But our study is done on Dessie referral hospital and Merry stops clinic Dessie branch. In Kenya, 52 % of women seeking post abortion care services receive contraception methods at discharge to avoid unwanted pregnancy (16).

In this study, 33.6% of women had previous history of abortion. The finding of this study is comparable with many studies done in Ethiopia and other countries. In Batu Town, 25.6% Women, Working in Flower Farms report to have history of abortion (11). A study done in three regional state of Ethiopia shows, overall 15.1% of respondents were had at least one abortion episode (17). Another study done in northwest of Ethiopia states 19% of respondents has abortions (13). A study done in maternal health review in Uganda showed that approximately 15-23% of female youths 15-24 years of age had an abortion (18). In Kenya, About 16 % of women who presented at the facilities for post abortion services after an induced abortion reported to have had a previous induced abortion (16). The finding in this study shows high prevalence of history of abortion than the above mentioned studies. The difference might be due to the fact that this study includes only women who seek post abortion service. But other studies include all reproductive age group women (11-13) and youths (14). Time, culture and study population may also contribute for the deference (16).

Respondents who had unintended pregnancy had four point six times more likely to have unsafe abortion than women who had intended pregnancy. Literature shows that unwanted pregnancies at the time of conception are more likely to end up in abortion compared with wanted pregnancies. In Batu (11) and Addis Ababa (19) 79.4% and 95% of induced were unwanted pregnancy respectively. However, wanted pregnancy may be changed into unwanted pregnancy due to child malformation, maternal physical and mental health and uncertainty of friendship (20-22). Women may get unwanted pregnancies due to non-use of contraceptive (23-25), contraceptive method failure or incorrect and inconsistent method use (24, 26-28).

Women who had no previous complication of abortion were 6.5 times more likely to have unsafe abortion than who had experienced previous abortion related complications. Women with previous complications may learn the danger of abortion for their life through experience. Therefore they could prefer safe abortion services for termination of pregnancy.

Single women were 1.8 times more likely to have unsafe abortion than married women. Most of the time single women who were sexually active didn't use contraceptives which put them at a higher risk of unwanted pregnancy and leads them to conduct induced abortion. Since they are young adolescents and youths, they lack good decision of self control, peer pressure may lead them to engage in unprotected sexual life while living alone or with other friends, shame about safe abortion, fear of negative social environment and poor information about the site and available safe abortion services may contribute for them to undergo unsafe abortion services that ends up with many complications even death (29, 30).

Limitations of the Study

The study suffers from the usual limitation of a cross sectional study in detecting causes and affect relationship.



Moreover, the nature of the sensitivity of the issue (abortion) underestimated the prevalence of unsafe abortion. However, numerous scientific procedures such as supervision, pretest of data collection tool, and adequate training of data collectors and supervisor were employed to minimize the possible effects.

CONCLUSION

In present study, about 45% the study subjects were undertake unsafe abortion despite the availability of safe abortion services in the town. Almost all abortion care seeking women utilizes postabortion family planning. Unintended pregnancy, single and no previous pregnancy related complications were the main predictors that increase likely hood of unsafe abortion among women who seeks post abortion care.

RECOMMENDATIONS

In Ethiopia, termination of pregnancy is legal when the pregnancy results from rape or incest, when continuation of pregnancy dangers the health or life of the women or the fetus, in case of fetal impairment, for women with physical or mental disabilities and teenage pregnancy

(8). Despite the relative liberalization and the availability of safe abortion services, significant proportions of women undergo unsafe abortion. This indicates that access to safe abortion service remains to be a problem in the area. This demonstrates liberalization of abortion by itself is not enough. Information education communication should be delivered about the effect of unsafe abortion, the availability of safe abortion services and the legal ground of abortion especial for teens.

DECLARATIONS

Ethics approval and consent of participants

The study proposal got ethical approval from Wollo University, medical and health science college ethical review committee. Administrative bodies of respective town administrations were asked for their permission of the research to be conducted in the area. Informed oral consent was obtained from participants.

Availability of data and materials

“The data that support the findings of this study has a sort of identifier of individual participants and researcher reserved to send it”

Competing interests

The authors declare that they have no competing interests.

Funding

The funding for this study was Wollo University.

Authors' contributions

NM was the principal investigator (conception and design of the study, acquisition of data, analysis of data, interpretation of data, and revising the paper), *MA* was involved in advising during proposal development, data analysis and revising the paper and involved in revising the paper and manuscript write-up.

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Table 1. Socio demographic characteristics of clients who seek abortion service in health facilities of Dessie town, northeast Ethiopia, 2016 (n=360).

Variables	Frequency	%
Age		
15-19	86	23.9
20-24	129	35.8
25-29	56	19.2
30-34	69	15.6
=>35	20	5.6
Residence		
Urban	295	81.9
Rural	65	18.1
Ethnicity		
Amhara	262	72.8
Oromo	34	9.4
Tigre	33	9.2
Afar	31	8.6
Religion		
Orthodox	139	38.6
Muslim	169	46.9
Catholic	26	7.2
Protestant	22	6.1
Others	4	1.1
Marital status		

Single	128	35.6
Married	232	64.4
Educational status		
cannot read and write	60	16.7
read & write	13	3.6
grade 1-4	52	14.4
grade 5-8	65	18.1
grade 9-10	87	24.2
grade 11-12	18	5
college/ university student	19	5.3
college/university graduate	46	12.8
Occupation		
Student	90	25
Housewife	122	33.9
Farmer	51	14.2
Merchant	14	3.9
Daily labourer	23	6.4
private employ	14	3.9
Employed	18	5.0

Table 2. Reproductive history of women who seeks abortion services in health facilities of Dessie town, northeast Ethiopia, 2016 (n=360)

Variable	Frequency	%
Previous history of abortion		
Yes	121	33.6
No	239	66.4
Month of pregnancy during abortion		
3 month and before	152	42.2
After 3 month	208	57.8
Gravidity		
4 and below	227	63.1
Above 4	133	36.9
Face complication during abortion		
Yes	121	33.6
No	239	66.4
Type of complication(n=121)		
Bleeding	67	53.4
Trauma to the genitalia and infection	54	46.6
Type of abortion		
Safe	198	55.0
Unsafe	162	45.0
Method used for unsafe abortion (n=162)		
Traditional Medication	135	83.3
Overdose of modern medication	27	16.7
Receive postabortion family planning		
Yes	353	98.1
No	7	1.9



Table 3. Factors associated with unsafe abortion among women who seeks abortion services in health facilities of Dessie town, northeast Ethiopia, 2016 (n=360)

Variables	Type of Abortion		COR,95% CI, p value	AOR,95% CI, p value
	Unsafe	Safe		
Age				
15-32	140	144	2.386(1.38,4.126), 0.002	1.435(0.774,2.660),0.252
33-49	22	54	1	1
Type of pregnancy				
Unintended	124	74	5.468(3.439,8.693), 0.001	4.595(2.418-8.734), 0.001*
Intended	38	124	1	1
Marital status				
Married	68	115	1	1
Single	94	83	1.915(,1.257,2.917),0.002	1.762(1.112,2.793), 0.001*
Educational status				
Primary and below	71	119	1	1
Above primary	91	79	1.931(1.267,2.941),0.002	1.367(0.857,2.180), 0.190
History of abortion				
Yes	32	89	1	1
No	130	109	3.317(2.058,5.347), 0.001	0.973(0.49,1.942), 0.943
Month of pregnancy				
3month and before	71	81	1.127(0.74,1.716), 0.577**	
After 3 month	91	117	1	
Gravidity				
4 and below	91	136	1	1
Above 4	71	62	1.711(1.111,2.636),0.015	1.269(0.782,2.059), 0.335
Complication previously				
Yes	32	89	1	1
No	130	109	3.317(2.058,5.347),0.001	6.478(1.207-34.77),0.0029*

NB:* INDICATES SIGNIFICANT ASSOCIATION IN THE FINAL MODEL ** VARIABLE NOT ENTERED INTO THE FINAL MODEL