Original Research

PREVALENCE OF INDUCED ABORTION AND ASSOCIATED FACTORS AMONG WOMEN OF REPRODUCTIVE AGE IN HARARI REGION, ETHIOPIA

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ABSTRACT

Background: Abortion is a very common experience in every culture and society. Out of the 210 million pregnancies that occur each year globally, an estimated 46 million (22%) end up in induced abortion, in relation to that, 19 million women experience unsafe abortions annually.

Objective: The aim of the study is to determine the prevalence and associated factors of induced abortion among women of reproductive age group in public health facilities from March 25– April 25, 2019, in Harari Region.

Methods: A cross sectional study design was conducted. The sample size was 620 abortion cases. Structured questionnaire was used for data collection. Data were entered to Epi-Data version 3.5.3 and analyzed using SPSS version 20. Descriptive statistics, binary and multivariate logistic regression and odds ratio with 95% confidence intervals was used to identify the independent factors of induced abortion cases status. *P*-value <0.05 was considered as statistically significant association.

Result: The mean age of the respondents was 29.5 years, with a standard deviation of 6.5. In this study the magnitude of induced abortion was 42.7%. Age ≥30, single marital status, occupational status students and commercial sex worker were statistically significant associated with induced abortion (*p*<0.05).

Conclusion: The study revealed a high level of induced abortion. Unwanted pregnancy is high among abortion patients in the study area. Hence, strict counseling about family planning method reminder, and partner involvement in family planning service should be recommended.

Keywords: prevalence, induced abortion, women of reproductive age, Harari region

BACKGROUND

Abortion is a termination of pregnancy by the expulsion of a fetus or embryo from the uterus before viability. it can be spontaneous or induced (Cherie & Asmerom, 2017; Leveno et al., 2007). World Health Organization (2012) defines induced abortion as a purposeful termination of pregnancy prior to twenty weeks for developed countries and twenty-eight weeks for developing countries.

An estimated annual number of unsafe abortions in Sub-Saharan Africa for women of reproductive age are 5.5 million, the overall annual abortion rate is 34/ 1,000 women (Åhman & Shah, 2011; Tesfaye, Hambisa, & Semahegn, 2014; The Guttmacher Institute, 2017). It is estimated that there are 3.27million pregnancies in Ethiopia every year, of which approximately 500,000 ends by abortion (Ministry of Health of Ethiopia,

2010). Abortion rate is highest in urban areas of Ethiopia, which 92/1,000 in Addis Ababa and 78/1,000 in smaller regions of Ethiopia like Harari & Dire Dawa (The Guttmacher Institute, 2017).

In 2005, Ethiopia expanded its abortion law, which had previously allowed the procedure only to save the life. Currently, abortion is legal in Ethiopia under certain preconditions. Despite the implementation of the new law, almost 6 in 10 abortions in Ethiopia are unsafe (IPAS & Guttmacher Institute, 2010).

After legalization of abortion in Ethiopia, trends of abortion ratio decreased but case fatality rate of abortion increased from 1.1% in 2003 to 3.6% (Ministry of Health of Ethiopia, 2010). Legalization of abortion law and fulfilling of unmet need of contraceptive cannot reduce abortion and MMR as needed as possible, rather flow of abortion and related deaths are common (Singh et al., 2010). The aim of this study was to assess the prevalence of induced abortion and associated factors among women of 15-49 years age in Harari region, Ethiopia.

METHODS

Study Area and Period
The cross-sectional study was conducted from March 25 to April 25, 2019 in health facilities of Harari region, Harari People National Regional State. It is located in Eastern part of Ethiopia, 525 km from Addis Ababa. All public health facilities (two hospitals and eight health centers) and FGA clinic were included in the study.

Sampling Procedure
The sample size was calculated based on the following assumptions: proportion of patients who seek post-abortion care (P = 14.4%) (Worku & Fantahun, 2006). Taken to get the maximum sample size, Z = 1.96 at 95% confidence interval, d=the level of precision (0.05) and non-response rate=10% and design effect of 2; then the total sample size was calculated to be 620. A sampling with proportional to size was used to allocate samples to the health facilities. Convenient sampling technique i.e. all abortion cases who

visited gynecological department of public health facilities during the study period were included until the required sample size was obtained.

Data Collection Tools
A semi-structured questionnaire was used for data collection. It was adapted from tools used to assess induced abortion prevalence in different literatures to satisfy the objectives this study. The questionnaire had sub-topics of socio-demographic, reproductive history and family planning related history. The data were collected by trained midwives.

Data Analysis
After data collection, the questionnaire was checked for completeness and coded. The data were entered into Epi-info version 3.5.3 and exported, cleaned and analyzed by using SPSS version-20. Descriptive analyses were performed and bivariate analyses were used to find out the association of independent variables. Variables with a $p<0.05$ in the bivariate analysis were entered into multiple logistic regression and variables with $p<0.05$ in the multivariate analysis were considered to have statistically significant associations.

Ethical Consideration
Ethical clearance was obtained from ethical clearance Committee of Harar Health Science College (Reference number: HHSC-79/2019). Consent was obtained from the administrative bodies of the health facilities and from the participants.

RESULTS

Socio-Demographic Characteristics of the Study Participants
A total of 620 patients were identified and 611 women participated in the study making the response rate 98%. Majority, 231 (37.7%), of the respondents were aged between 30 and 49 years. The mean age of the respondents was 29.5 years with a standard deviation of 6.5. More than half, 444 (72.7%), of the participants were married, 134 (21.9%) were illiterate who did not read and write, and 270 (44.2%) were housewives (**Table 1**).

Table 1 Socio-demographic characteristics of post abortion's participants at public health facilities of Harari Region, East Ethiopia, 2019

Variables (n= 625)	Number	Percentage (%)
Age (mean 29.5 (SD ± 6.5))		
15–19	39	6.4
20–24	114	18.7
25–29	227	37.2
30–49	231	37.7
Marital status		
Single	107	17.5
Married	444	72.6
Living together	15	2.5
Divorced/ widowed	45	7.4
Occupational status		
House wife	270	44.2
Student	90	14.8
Daily laborer	62	10.1
Office worker	84	13.7
Commercial sex worker	31	5.1
House maid	74	12.1
Educational status		
Illiterate	134	21.9
Read and write	166	27.2
Primary education	139	22.7
Secondary education	142	23.2
Tertiary education	30	5

Table 2 Reproductive history and family planning of post abortion clients in health institutions of Harari Region, East Ethiopia, 2019

Variables	Frequency	Percentage (%)
Number of pregnancies		
<4	496	81.2
>4	115	18.8
Number of deliveries		
None	254	41.6
1	87	14.2
2–4	221	36.2
>5	49	8
Have you ever had any abortions		
Yes	102	16.7
No	509	83.3
Frequency of previous abortion (n=102)		
Once	94	92.2
Twice	8	7.8
Type of abortion (n=102)		
Spontaneous abortion	37	36.27
Induced abortion	65	63.73
Current pregnancy unwanted		
Yes	363	59.4
No	248	40.6
Ever heard Emergency contraceptives		
Yes	543	88.9
No	68	11.1
Ever used contraceptives		
Yes	575	94.1
No	36	5.9

Reproductive History and Family Planning

Among the total responding women, 496 (81.29%) of the respondents have history of less than four pregnancies including the current pregnancy that ended in abortion. The majority, 254 (41.6%), of the participants have no history of delivery. When investigated the time of the last delivery 138 (38.5%) gave birth before 1year.

One hundred two (16.7%) of the respondents had previous history of abortion, which was experienced once in 92.2%. The majority, 363 (59.4%), of the post-abortion patients revealed that the current pregnancy which ended in abortion was un wanted. The majority, 543 (88.9%) of the study participants had ever heard about emergency family planning method, 575 (94.1%) of the participants reported that they had been using contraceptive at least once in their life time (**Table 2**).

Reasons for Unwanted Pregnancy, Place and Methods of Interference

Those who reported their last pregnancy as reason for unwanted stated that 117 (32.23%) partner pressure and 114 (31.40%) forget to take contraceptives regularly as main reasons for the unwanted pregnancy. The majority of the respondents replied that methods used to induce the abortion were MVA. For most of them the induction was performed by 545 health workers (89.2%) (**Table 3**).

Table 3 Reasons for unwanted pregnancy, place and methods of interference to the current pregnancy among post abortion clients in public health institutions of Harari Region, East Ethiopia, 2019

Variables	Number	Percentage (%)
Reason for unwanted pregnancy (n=363)		
Contraceptive failure	99	27.27
Forget to take contraceptives	114	31.40
Partner pressure	117	32.23
Rape	33	9.09
Reason for undertaking abortion		
Health problem	20	3.27
Economic reason	109	17.84
Closeness of pregnancy	127	20.79
Attending school	313	51.23
Incent	13	2.13
Fear of parents and public	29	4.75
Method used for interference		
MVA	456	74.63
Medication (oral, vaginal and injection)	142	23.24
I do not know	13	2.13
Induced abortion performed by		
Health workers	545	89.20
Traditional birth attendant	63	10.31
Self	3	0.49
Do you know complication of abortion		
Yes	581	95.1
No	30	4.9

Family Planning Method on Discharge

573 (93.8%) got post-abortion family planning method, and the most common reason for not getting family planning method was, 33 (86.8%) refusal and, 2 (5.3%) not counseled family planning,1(2.6%) referred to other facility,1(2.6%) health reason and1(2.6%). Contraceptives were not available at that time.

Factors Associated with Induced Abortion

In bivariate logistic regression analysis, age of participants, marital status, occupational status, educational status, place of residence, number of pregnancy and previous abortion were statistically associated with induced abortion. Variables that showed statistically significant associations with induced abortion in the bi-variate analysis were entered into a multivariate logistic regression

model to see the independent effect of each potential determinant while controlling for possible confounders. After controlling the effect of other predictor variables, the multivariate logistic regression analysis showed statistically significant association between, marital status and occupational status and induced abortion with $p<0.05$.

The study findings showed that those single marital status patients were about five times more likely to induce abortion than those widowed (AOR = 5.5, 95% CI = 1.22,25.5, *p*=0.027). Students were about three times more likely to induce pregnancy than those house maid (AOR = 2.95; 95% CI = 1.02, 8.51) and Commercial sex worker were about fourteen times more likely to have induced abortion than that of house maid (AOR =14,95%, CI = 1.42-148.8, *p*=0.024)

DISCUSSION

In this study, the magnitude of induced abortion was 42.7%. It is very high compared to study done in health facilities of Guraghe zone, Southern Ethiopia which was 12.3 % (Tesfaye et al., 2014), Wolayita Sodo 6.5 % (Gelaye, Taye, & Mekonen, 2014), Nigeria 10% (Awusi & Okeleke, 2010), and Guraghe Zone, Ethiopia12.3% (Tesfaye et al., 2014). This might be due to relaxed restrictions on abortion provision for safe abortion in Ethiopia that include medical abortion. This relaxation of laws and advertising on safe abortion increases in awareness level and seeking care behavior of the community on safe abortion that are capable of creating awareness better than the previous strategy in Ethiopia.

In this study the finding showed that those single marital status mothers were about five times more likely to undertake induce abortion than those of widowed. This finding is in agreement with the study conducted in Jimma Ethiopia (Bonnen, Tuijje, & Rasch, 2014), Tigray, Northern Ethiopia (Abera, Berhanu, Kahsay, Gebru, & Aregay, 2012), and Burkina Faso (Ilboudo, Somda, & Sundby, 2014). The possible explanation could be due to some single girls become pregnant from their spouse before marriage without knowing so that due to fear of the family and the community

so that they have high chance to had induced abortion.

Our study showed that commercial sex worker were fourteen times more likely to have unwanted pregnancy and induced abortion compared to house maid. Similarly other health facility based research conducted in northern, Ethiopia reveals that commercial sex workers had significantly higher chance to induce abortion (Abera et al., 2012).

This study showed that students were about three times more likely to had induce abortion than those of house maids similarly a study done in Jimma, Ethiopia (Bonnen et al., 2014). Schwandt et al. (2011) showed that students were associated with induced abortion. This might be due to the fact that children in school will live with their family under strict parental supervision which prevents them from unwanted pregnancy which ends up with induced abortion.

Strength and Limitation of the Study
The study covered all public health institutions providing abortion related health care serves in Harari region, and since the study was facility based and only it incorporates public facility but not private facilities, so the findings may not be generalizable for general population.

CONCLUSIONS

Generally, the study revealed a high level of induced abortion. Unwanted pregnancy is high among abortion patients in the study area. Marital status and occupational status of the mothers were factors significantly associated with induced abortion. It is therefore suggested to promote and increase access of family planning method (condom) use among high school/ university students and commercial sex workers.

REFERENCES

Abera, G. B., Berhanu, B., Kahsay, A. B., Gebru, H. B., & Aregay, A. (2012). Assessment of determinants of induced abortion among child bearing age women attending maternal and child health clinic in Mekelle town, Tigray, Ethiopia: a cross sectional study. *International Journal of Pharmaceutical Sciences and Research, 3*(12), 4745.

Åhman, E., & Shah, I. H. (2011). *Unsafe Abortion: Global and Regional Estimates of the Incidence of Unsafe Abortion and Associated Mortality in 2008*: World Health Organization.

Awusi, V., & Okeleke, V. (2010). Post induced abortion morbidity and mortality in Oleh, Nigeria. *Benin Journal of Postgraduate Medicine, 12*(1).

Bonnen, K. I., Tuijje, D. N., & Rasch, V. (2014). Determinants of first and second trimester induced abortion-results from a cross-sectional study taken place 7 years after abortion law revisions in Ethiopia. *BMC Pregnancy and Childbirth, 14*(1), 416.

Cherie, N., & Asmerom, B. (2017). Proportion of safe abortion and associated factors among women who seek abortion care services in family guidance and Marie Stopes International Clinic in Dessie Town, North East Ethiopia. *Journal of Public Health and Epidemiology. 9*(10), 279-285.

Gelaye, A. A., Taye, K. N., & Mekonen, T. (2014). Magnitude and risk factors of abortion among regular female students in Wolaita Sodo University, Ethiopia. *BMC Women's Health, 14*(1), 50.

Ilboudo, P. G., Somda, S. M., & Sundby, J. (2014). Key determinants of induced abortion in women seeking postabortion care in hospital facilities in Ouagadougou, Burkina Faso. *International Journal of Women's Health, 6*, 565.

IPAS, & Guttmacher Institute. (2010). *Facts on Unintended Pregnancy and Abortion in Ethiopia*. New York: IPAS and Guttmacher Institute.

Leveno, K. J., Cunningham, F. G., Alexander, J. M., Bloom, S., Casey, B., & Dashe, J. (2007). *Williams manual of obstetrics: Pregnancy complications*: McGraw-Hill Medical.

Ministry of Health of Ethiopia. (2010). *Health Sector Development Program IV in Line with GTP, 2010/11–2014/15*. Addis Ababa, Ethiopia: Federal Democratic Republic of Ethiopia.

Schwandt, H. M., Creanga, A. A., Danso, K. A., Adanu, R. M., Agbenyega, T., & Hindin, M. J. (2011). A comparison of women with induced abortion, spontaneous abortion and ectopic pregnancy in Ghana. *Contraception, 84*(1), 87-93.

Singh, S., Fetters, T., Gebreselassie, H., Abdella, A., Gebrehiwot, Y., Kumbi, S., & Audam, S. (2010). The estimated incidence of induced abortion in Ethiopia, 2008. *International Perspectives on Sexual and Reproductive Health*, 16-25.

Tesfaye, G., Hambisa, M. T., & Semahegn, A. (2014). Induced abortion and associated factors in health facilities of Guraghe zone, southern Ethiopia. *Journal of Pregnancy, 2014*.

The Guttmacher Institute. (2017). Induced Abortion and Post Abortion Care in Ethiopia, Fact Sheet.

Worku, S., & Fantahun, M. (2006). Unintended pregnancy and induced abortion in a town with accessible family planning services: the case of Harar in eastern Ethiopia. *Ethiopian Journal of Health Development, 20*(2), 79-83.

World Health Organization. (2012). *Safe and unsafe induced abortion: global and regional levels in 2008, and trends during 1995-2008*. Geneva: World Health Organization.