

UTILIZATION AND ASSOCIATED FACTORS OF EMERGENCY CONTRACEPTION AMONG WOMEN SEEKING ABORTION SERVICES IN HEALTH INSTITUTIONS OF DESSIE TOWN, NORTH EAST ETHIOPIA,2018

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Research note

Keywords: Emergency contraceptive, Seeking abortion, Dessie Town

Posted Date: August 21st, 2019

DOI: <https://doi.org/10.21203/rs.2.13349/v1>

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Version of Record: A version of this preprint was published on October 22nd, 2019. See the published version at <https://doi.org/10.1186/s13104-019-4707-0>.

Abstract

Objective The aim of the study was to assess utilization and associated factors of emergency contraception among women seeking abortion services in Health Institutions of Dessie Town, North East Ethiopia, 2018. **Results** Among the interviewed 784 women 400(51%) utilized emergency contraception. Women's age [AOR: 2.10, (95% CI 1.200, 3.671)], residence [AOR: 2.02 (95% CI 1.273, 3.218)], marital status [AOR: 1.71, (95%CI: 1.176, 2.485)], knowledge of emergency contraception [AOR: 5.66, (95%CI: 3.976,8.070)], and attitude towards emergency contraception [AOR: 2.75(95%CI: 1.946, 3.881)] were significantly associated factors with the utilization of emergency contraceptives. The emphasis of health education on emergency contraceptives shall focus on those women who are from the rural area, older and married women.

Introduction

Emergency contraception refers to birth control modalities that when used after unprotected sexual intercourse within defined time limits can prevent unwanted pregnancies(1). Emergency contraceptive is indicated after unprotected sexual intercourse, following sexual abuse, misuse or non-use of contraception(2).

worldwide, approximately 40 percent of the pregnancies (85 million) were unintended (3). Women with unintended pregnancy may face the choice between terminating the pregnancy or allowing unwanted birth (4).

Every year, In developing countries, at least 22,000 women dies from abortion-related complications (8). An estimated 620,300 induced abortions were performed in Ethiopia in 2014(5). Even if performed safely, abortion might be painful and may have psychological and physical stress for the women (6,7).

There are two main EC modalities, these are the Oral emergency contraceptives and intrauterine devices. The oral EC have various degrees of protection against pregnancy according to the time that they were taken. If taken within 24 hours of unprotected sexual intercourse, they reduce the risks of pregnancy by 95% (8,9). Post-coital insertion Cu-IUD within 5 days after unprotected sexual intercourse in addition to being an effective method of emergency contraception, it can also serve as a safe and effective method for long-term contraception (10).

If emergency contraception were easily available and distributed along with appropriate advocacy activities, millions of unwanted pregnancies and abortions might have been averted (11). Furthermore, the use of EC reduces the expenditures on medical care by preventing unintended pregnancies, which are very costly (8).

In Ethiopia, even though EC pills are distributed free of charge through the support of the non-governmental organization and there are many over the counter preparations for sell, still there is a low utilization of emergency contraceptive pills. Therefore, the aim of this study was to assess utilization and

associated factors of emergency contraception among women seeking abortion care services in the health institutions of Dessie Town.

Methods

Study design and setting

An institutional-based cross-sectional study was conducted from August 2, 2018, to January 30 / 2019 at health institutions of Dessie Town. Dessie Town is located at 401 km from the capital city of Ethiopia, Addis Ababa. The town has five Hospitals (one public referral, one public general and three private), eight health centers and twenty-seven private clinics. Currently, there are 10 health institution fully providing safe abortion care services for the community. In those health institutions, 6 months prior to the data collection period, there were 2830 safe abortion cases.

Sample size and sampling procedure

A single population proportion formula was used to calculate the sample size of 784 with the following assumptions. The magnitude of EC utilization 9.7% from a previous study done in Diredawa(12), 95% confidence interval, 3% margin of error, a design effect of 2 and nonresponse rate of 10%. First, the 10 health facilities that provide abortion service were stratified into 5 governmental and 5 private institutions. Then, out of the 5 institutions, 3 were selected from each group by simple random sampling technique. After proportionally allocating the total numbers of the participants, a systematic random sampling method was employed to select the actual study participants.

Operational definitions

Utilization of EC: if a woman has any history of EC usage (13,14).

Knowledgeable: Respondents who scored above the mean value of the knowledge assessment question (15).

Favorable attitude: Respondents who scored above the mean value of attitude assessment questions (16,15).

Data collection instrument and process

Data was collected by face to face interview using a semi-structured and pre-tested questionnaire first prepared in English and translated to Amharic and then translated back to English. Ten BSc midwifery holders were involved in the data collection while two MSc holders supervised the data collection process.

Data analysis

Data were entered with epi-info version7 and analyzed using SPSS version 20 software. Bivariate and multivariable logistic regression analyses were conducted to identify predictors for emergency contraceptive utilization. Variables found to be significant on Bivariate analysis ($p < 0.2$) were included in the multivariable model. Adjusted odds ratios and 95% confidence intervals were generated. Probability values < 0.05 were considered statistically significant.

Results

Socio-demographic characteristics

A total of 784 women were involved in the study making a response rate of 100%. The mean age of the respondents was 24.28 years with SD of ± 4.74 . The majority of 621 (79.2 %) were urban residents, and 420 (53.6 %) were single. (*Table 1 at the end of the text document*).

Sexual and reproductive characteristics of respondents

Four hundred three (51.4%) of respondents had started first sexual intercourse less than the age of 18. Among the respondents, 342 (43.6. %) have one or more children. Six hundred four (77%) were first time arrival for termination of pregnancy, 179 (22.8) had a prior history of induced abortion, among those who had a history of induced abortion, 135 (75.4%) had one episode, and 28(15.6%) had more than three induced abortions.

Distance from home to the nearby health institution (in terms of time elapse)

The respondent's distance from home to the nearby health institution ranges from 1 minute to 720 minutes. Majority of the respondents 638(81.4%) stated that stated they could reach in the nearby health institution within 30 minutes.

Utilization of regular family planning methods

Five hundred forty-one (69%) had ever used regular contraceptive methods. Among those who had ever used regular contraceptive method 397 (73.4%) used an injectable contraceptive.

5.5 Knowledge and attitude about emergency contraceptive

The overall summary index for knowledge and attitude of the respondents about EC disclosed that 434 (55.4%) were knowledgeable and 376(48%) had a favorable attitude towards EC.

Utilization of emergency contraception

In this study 400(51%) of respondents had ever used EC; were all of them used EC pills. The main source of information for those who ever used EC were friends 243(60.8%), sexual partner 84 (21%), media 50(12.5%), health professionals 6(1.5%), web pages 7(1.7%) and 10(2.5%) other sources,

Respondents who had never used EC mentioned main factors for non-utilization and they are; lack of information 255(66.5%), time inconvenience 14(3.7%), lack of willingness19(4.9%), drugs unavailability5(1.3%), privacy issue6(1.5%).

Factors associated with the utilization of emergency contraception

On the bivariate analysis factors found to be significantly associated with EC use were: women's age, residence, religion, ethnicity, marital status, father's educational status, number of children, knowledge of EC and attitude towards EC From those variables found to be significant in the bivariate analysis with EC use; age of respondents 20–24 years adjusted odds ratio [AOR = 2.10, 95%CI: 1.200 - 3.671], residence [AOR = 2.02, 95% CI: 1.273 - 3.218], single marital [AOR = 1.71,95%CI:1.176 - 2.485], knowledge of EC AOR = [5.66,95%CI: 3.976, 8.070], attitude towards EC [AOR = 2.75, 95%CI: 1.946 - 3.881] were found to be significantly associated with EC use after adjusting possible confounding variables (*Table 2 at the end of the text document*)

Discussion

This study finds out that 400(51%) of women who came for abortion service had ever used EC (95%CI: 47.9, 54.6). This is in agreement with the study that was done among abortion care seekers in China (48.8%)(17).

This finding is lower than the studies that were done in North India (70%) in Durban South Africa (62.1%) and among women of the reproductive age group in India (18–20). Possible reasons for this difference might be due to the differences in the study area, study population, and knowledge about EC. In the North Indian study, the participants were recently married and data were collected from a single government health institution. additionally, their knowledge score was also higher than the current study. In the Durban study, the main source of information about EC were health care professional's contrary to the current study where the majority of the respondents obtained information about EC from their friends who might not share correct information that intern leads to low utilization.

This finding is higher than studies that were done among abortion seekers in Jimma specialized hospital were none of them ever used EC, Dire-dawa (9.7%) and India (1.155%) had ever used EC (21,12,22). this difference might be due to the difference in socio-demographic, cultural or developmental differences of the study with India. In the Jimma and Diredawa study, the knowledge and attitude of the participants were lower than the current study, which may reduce utilization of EC.

Women's age was a significant factor for EC use. Women in their age 20–24 years were 2.10 times more likely utilized EC as compared with women aged ≥ 30 years. This is in agreement with the studies conducted among abortion seekers in Dire-dawa(12), and South Africa(23). Possible reasons for this might be women in this age group might not use regular contraceptive methods consistently due to cultural influence which might lead them to use EC. In addition, this group of women is mostly college students that might have the opportunity to get information about EC after unprotected sexual intercourses from their peer which intern increase the utilization.

Residence was an important determining factor for EC use. Those women who were living in an urban area were 2.02 times more likely utilized EC as compared with those who were living in the rural area. This is consistent with the study that was done in Arbaminch(24). The possible reasons might be women living in urban areas could be more exposed to media, which might create awareness about family planning methods including EC. Another explanation could be the fact that EC is more accessible in the urban areas than their rural counterparts. On the contrary, a shortage of media coverage in the rural area could have a negative influence utilization of EC for women living in the rural area.

Marital status was significantly associated with EC use. Women who were single were 1.71 times more likely to utilized EC as compared with those who were married. This is in agreement with the study that was done in Dire-dawa(22). The possible explanation could be single women might not use regular contraceptive methods consistently which increases the utilization. In addition, single women could have unplanned sexual intercourse not feasible to use regular contraceptive methods which intern leads to more utilization of EC.

Women who were knowledgeable about EC were 5.66 times more likely to utilize. This is coherent with studies that were done among abortion seekers in Dire-dawa(22), South Africa(24). This might be explained by knowing effectiveness, where they can get when they can use EC may help to use EC.

Attitude towards EC was significantly associated with the use of EC. Participates who had a favorable attitude towards EC were 2.75 times more likely to utilized EC. This is consistent with studies done in Debre-markos higher institutions(26). The above reports might be explained with women who have a favorable attitude towards EC might want to know more about EC and to use it.

Limitations Of The Study

Questions that had sensitive nature like age of first sexual intercourse, history of previous induced abortion might create social desirability bias.

Abbreviations

AOR- Adjusted Odds Ratio, CI- Confidence Interval, COR- Crude Odds Ratio, Cu-IUD- Copper bearing Intrauterine Device, EC- Emergency Contraceptive

Declarations

Ethics approval and consent to participate

Ethical clearance was obtained from the School of Midwifery under the delegation from the Ethical Review Board of the University of Gondar. Written consent was obtained from each study participants after informing the objective of the study. For minors under the age of 18 consent was obtained from parients or gurdians. In the consent, statements about the potential risk, benefit, and confidentiality were included. Ethics committee approval was obtained for this written consent.

Consent for publication: Not applicable

Data Availability: The authors declare that the data regarding this manuscript can be accessed as per the request of any interested body and can be submitted for publication in Spring Nature as supplementary materials.

Competing Interest: The authors declare that they have no competing interests

Funding: no funding.

Authors' contributions: AE, TS involved in the conception and design of the study, participated in data collection, analyzed the data and drafted the manuscript and approve the final version of the manuscript. TZ approved the proposal with some revisions, participated in data analysis and interpretation revised subsequent drafts of the manuscript and approve the last version of the manuscript. All authors read and approved the final manuscript.

Acknowledgments: We are very grateful to the University of Gondar for approval of the ethical clearance. We are also grateful to the Dessie town health institution administrators for their permission by giving us a support letter to undertake the study. The study participants, and data collectors

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Tables

Table 1: Sociodemographic characteristics of women seeking abortion services in Health Institutions of Dessie Town, 2018(n= 784)

Variables	Frequency
Age	
13- 19 years	130
20 - 24 years	285
25 - 29 years	259
\geq 30 years	110
Residence	
Urban	621
Rural	163
Marital status	
Single	501
Married	283
Religion	
Muslim	420
Orthodox	344
Others	20
Ethnicity	
Amhara	719
Oromo	29
Others	36
Educational status	
No primary education	55
Primary education	180
Secondary education	317
Tertiary education	232
Father's educational status	
No primary education	480
Primary education	105
Secondary education	110
Tertiary education	89
Mother's educational status	
No primary education	614
Primary education	83
Secondary education	54
Tertiary education	33
Occupation	
Housewife	134
Merchant	110
Government employed	141
Student	285
Servant	86
Commercial sex worker	28
Living arrangement	
With family	275
With spouse	209
With peers in a rented house	60
Alone	165
Others	75

Income	
< 500 ETB	317
501 - 1000 ETB	162
1001 - 1500 ETB	72
1501 - 2000 ETB	92
Above 2000 ETB	141

Others for religion represent Catholic,
Protest

* Others for ethnicity Tigrie , South nations nationalists

* Others for living arrangement, with a relative, in campus,

Table 2: Bivariate and multivariate logistic regression analysis of factors associated with EC use among women seeking abortion service in Health Institutions of Dessie Town, North East Ethiopia, 2018 (n= 784)

Categorization	Utilization		COR(95%CI)	AOR (95% CI)
	Yes(n=400)	No(n=384)		
19 years	55	75	1.28(0.76, 2.16)	
24 years	171	114	2.62(1.67, 4.14)	2.10(1.200, 3.671)
25 - 29 years	134	125	1.88(1.19, 2.97)	
30 years and above	40	70	1	
Religion				
Muslim	47	116	1	
Non-Muslim	353	268	3.25(2.24, 4.73)	2.02(1.273, 3.218)
Marital status				
Married	129	154	1	
Single	271	230	1.40(1.05, 1.89)	1.71(1.176, 2.485)
Number of children				
One	240	202	1	
Two and above	160	182	0.74(0.56, 0.98)	
Ethnicity				
Muslim	193	227	1	
Non-Muslim	193	151	1.50(1.13, 2.00)	
Gender				
Male	14	6	2.74(1.03, 7.23)	
Female	357	362	0.56(0.28, 1.12)	
Age group				
18-24	20	9	1.26(0.44, 3.55)	
25-34	23	13	1	
35-44	204	276	1	
45-54	64	41	2.11(1.37, 3.25)	
55-64	71	39	2.46(1.60, 3.79)	
65 and above	61	28	2.95(1.82, 4.78)	
Knowledge				
Not knowledgeable	82	268	1	
Knowledgeable	318	116	8.96(6.47, 12.41)	5.66(3.976, 8.141)

ide			12.41	8.070)**
favorable attitude	140	268	1	
avorable attitude	260	116	4.29(3.18, 5.89)	2.75(1.946, 3.881)**

** P-value < 0.05