

Women's Knowledge about Accessibility of Safe Abortion Care Services at Selected Public Institutions in Addis Ababa, Ethiopia

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Abstract

Background: Ethiopia passed an abortion law in 2005, with the goal of reducing the number of unsafe abortions. Since then, the availability of safe abortion services has improved. On the other hand, increased access to services hasn't resulted in a significant reduction in unsafe abortions. The aim of this study is to examine women's knowledge on the availability of safe abortion care services at public facilities in Addis Ababa, Ethiopia.

Methods: A cross-sectional research of 432 women of reproductive age who work in non-health related public organizations was undertaken from April 1 to June 30, 2019. Data was collected using a structured questionnaire, and the data was cleaned in Epi-data before being exported to SPSS version 24.0 for analysis. Descriptive and inferential statistics such as Bivariate analysis using correlation coefficients, student t-test, A one-way analysis of variance and linear regressions used to examine the association between independent and dependent variables using 95% confidence interval (CI) and p-values below 0.05 considered as statistically significant.

Findings: This study included a total of 432 women. A majority (65.5%) of study participants heard of abortion care in which media was the major source of information for 343 (79.5%). Women's knowledge of abortion care service provision analyzed by independent-samples t-test showed place of grew up, history of miscarriage and previous information of abortion were predictors. A one-way between-groups analysis of variance was conducted to explore the impact of marital status on levels of knowledge about abortion care and showed statistically significant difference. Multiple linear regression models revealed that number of delivery, place of grew up, previous information on abortion and women encountered miscarriage on abortion were making a significant unique contribution to the prediction of the knowledge level.

Conclusions: This study identified women's knowledge about accessibility of safe abortion care services and number of delivery, marital status, place of grew up, previous information on abortion and women who encountered miscarriage were predictors of knowledge about accessibility of safe abortion services that future scholars would attest.

Keywords: Women; Safe Abortion; Accessibility; Ethiopia

Introduction

Globally, women experience unwanted pregnancy and some of them seek to terminate the pregnancy that unsafe abortion is a significant cause of maternal mortality and morbidity and a public health concern because of its terrible reproductive health consequences and impact on maternal health problems [1-3]. Ethiopia liberalized its abortion law in 2005 [4], and access to the availability of accurate information is a major determinant on the path to safe abortion [4]. Women seeking health care are scared by a lack of information and the fear of breaching the law [5,6]. According to a systematic review by Assifi and colleagues published in 2016, women's general awareness and knowledge of the legal status was less than 50% in nine studies, while knowledge of legalization/liberalization ranged from 32.3% to 68.2% in six studies[7].

Accurate knowledge of abortion for rape ranged from 12.8% to 98%, whereas knowledge of incest ranged from 9.8% to 64.5%. Abortion rates on the basis of foetal impairment and gestational restrictions ranged from 7% to 94% and 0% to 89.5%, respectively [7]. Women's understanding of the law is simply one aspect in their ability to receive proper treatment and learn about safe abortion options. Providing women with legal context information and means for gaining access to it can lower the chance of a woman seeking unsafe abortion services and, as a result, the likelihood of suffering from abortion-related morbidity or mortality [8].

According to a qualitative study [9] on minors' awareness of the new abortion law and access to safe abortion services, most girls and women are unaware of the new liberalized abortion law, and access to safe abortion services is also limited due to a lack of knowledge about the legal status of abortion and where to go for the procedure. Previous studies 5 - 7 years after Ethiopia's legal reform found no significant differences in the proportion of women with correct awareness and understanding of the law change, ranging from 35.7 - 57.2% [2,10,11]. Even in nations with long-standing liberal legislation, access to safe abortion is mediated by women's awareness of the law, and knowledge is often lacking. Women's access to information may also be limited by health care practitioners' knowledge of national abortion legislation regarding induced abortions. [8]. The proportion of women and health care providers with correct knowledge of legal status of abortion is both indicators for measuring access to information about safe abortion as out-lined in the WHO guideline on safe abortion [6].

Inadequate distribution of medical supplies and a significant discrepancy between the provision of healthcare in urban and rural settings further limit access to health care services [12]. Young women are most seriously affected and two of every three unsafe abortions globally occur among women 15 - 30 years, and 14% are among women not yet 20 years old that these figures are dramatically higher in some regions. About 60% of all unsafe abortions in Africa occur among women under the age of 25 including Ethiopia [13]. Ethiopia has launched a number of efforts to promote the availability of safe abortion services, with comprehensive abortion services increasing from 20% of the necessary threshold in 2008 to 38% in 2014 [12,14]. Unfortunately, due to limited access to and awareness of safe abortion services, these policy and service delivery efforts in Ethiopia have not resulted in a significant reduction in unsafe abortion or related maternal death and morbidity. The Ministry of Health has also stated that amending legislative regulations alone may not be sufficient to ensure service accessibility unless other issues are addressed [4]. This study aimed to contribute to filling this critical gap and focus on women's knowledge about accessibility of safe abortion care services at selected public institutions in Addis Ababa, Ethiopia.

Materials and Methods

Study area

The study was conducted in Addis Ababa, Ethiopia's capital. The city is divided into 10 sub-cities and 116 woredas, the lowest administrative entity in the city [15]. The city has re-established 14 agencies, 38 executive organs, and higher education institutions as legal entities, according to Proclamation No 35/2012 [16]. Among the nine, there are nine health-related offices or institutes. Six public hospitals and 53 health institutions are operated by the Addis Ababa City Government [15].

Study design and period

A quantitative research method based on institutional data was applied from April 1 to June 30, 2019.

Source of population

The study's source population was Addis Ababa-based women of reproductive age.

Study population

All reproductive age women who work in non-health related public institutions in Addis Ababa were the target of this study.

Inclusion and exclusion criteria

Inclusion criteria

Women of reproductive age group [18 - 49 Yrs], working in one of the Addis Ababa City Administration's public institutions, and willing to participate in the study were included in this study.

Exclusion criteria

Exclusion criteria included being on annual or sick leave throughout the data collection period, as well as refusing to participate in the study.

Sample size determination

Using an internet calculator, the sample size for this study was estimated using a 95% confidence level, 80 per cent power, and 0.2 effect size. We utilized 10,000 population variance and a minimum sample size of 393. The study's final sample size was 432 after accounting for a 10% non-response rate.

Sampling technique

One-stage cluster sampling of institutions was employed to enrol the requisite samples in this study as obtaining a list of reproductive-age women was unattainable. A simple random sample technique was used to select 30% [13 non-health entities] of the bureaus or entities in the Addis Ababa City Government. Finally, 432 women of reproductive age were chosen from 13 non-health institutions using a proportional allocation to size technique.

Data collection procedures and methods

Data was collected using structured questionnaire adapted from other studies [17] to assess women's knowledge about accessibility of safe abortion care services. Six socio-demographic measures for women, 11 reproductive health characteristics items, and 15 knowledge items about the accessibility of safe abortion services were included in the questionnaire. The questionnaire was translated from English to Amharic by a bilingual expert and then back to English by another bilingual expert. Prior to data collection, the Amharic version questionnaire was pretested on 5% of the study sample in institutions that were not chosen for the main study. Four data collectors and two supervisors were recruited for the study.

The lead investigator and co-investigators trained the data collectors and supervisors for 5 days using the training handbook. Supervisors received further training on data quality, cross-checking, and corrective actions. To ensure appropriateness and comprehension, a pilot study was done. The instrument was revised to increase its clarity and fluidity. Prior to the session, informed consent to participate in the study was obtained.

Data quality control

All data collectors were health professionals who were trained on data collection procedures by the primary investigator and co-investigators to ensure data quality. Furthermore, the data collection instrument and procedures were pretested on 5% of the study sample in institutions that were not chosen for the parent study to see if the responses were accurate, if the language was clear, if the data collection tools were appropriate, to estimate the time required, and to consider any necessary amendments.

Data processing and analysis procedures

Following data collection, completed questionnaires were coded, validated, cleaned, and put into Epi data program, which was then exported to SPSS version 24.0 for analysis. In the data analysis, descriptive statistics such as frequency, percentage, mean, and standard deviations were used. To examine factors related with knowledge about the accessibility of safe abortion care, researchers used bivariate analysis with correlation coefficients, independent-sample t-tests, and one-way analysis of variance (ANOVA). The level of statistical significance was fixed at 5%. Multiple linear regression analysis was utilized to find characteristics that were independently predictive of knowledge of safe abortion care accessibility.

Multi-categorical independent variables were dummy coded before being entered into the models. To avoid multicollinearity, we examined to determine if (a) the condition index was less than 3, (b) the variance inflation factors (VIF) were less than 5, and (c) tolerance was greater than 0.2.

Operational definitions

Accessibility

Access to health care is always described as the ability or ease with which consumers or communities may use appropriate services in proportion to their needs, and is thus characterized as the opportunity or ease with which they can use appropriate services in proportion to their needs [18]. In our study, accessibility is defined as the ability for women of reproductive age to reach and obtain suitable safe abortion care services within a reasonable distance, at the appropriate health facility, from a skilled provider, and at a reasonable cost.

Knowledge about accessibility of safe abortion services

The women's Knowledge of the availability of safe abortion care was assessed using a 15-item knowledge questionnaire. The total score was calculated as a number between 0 and 100. A higher score denotes a higher level of Knowledge.

Results

Socio-demographic characteristics

This study included a total of 432 women. Over half of those surveyed (55.8%) were married, and the majority (81%) were orthodox Christians. Participants in the study were between the ages of 18 and 48, with an average age of 28.5 (Table 1).

Table 1: Socio-demographic characteristics of women’s knowledge about accessibility of safe abortion care services at selected public institutions in Addis Ababa, Ethiopia 2019.

Variable	Number	Per Cent
Mean age(Range; SD)	29.51(18-48;5.4)	
Marital status		
Single	163	37.7
Married	241	55.8
Others*	28	6.5
Educational status		
Pre-university school	85	20.0
Diploma	166	39.0
Degree and above	175	41.1
Religion		
Orthodox	352	81.5
Protestant	60	13.9
Others**	20	4.6
Place grew up		
Urban	345	79.9
Rural	87	20.1

Characteristics of reproductive health

More than half of the participants in this study (260/60.2%) reported they had been pregnant at least once, with the majority being primigravid102 (39.2%) and having given birth to a baby at least once 110. (42, 3%). (Figure 1). Seventy-eight per cent of respondents (17.1%) had experienced a previous miscarriage, with the majority (74.4%) occurring as a result of spontaneous abortion. Two hundred eighty three (65.5%) of the total respondents had heard about abortion treatment, and the media was the most common source of information (79.5%), followed by peers, books, the internet, and others (23%, 21.6%, 9.9%, and 1.8%, respectively).

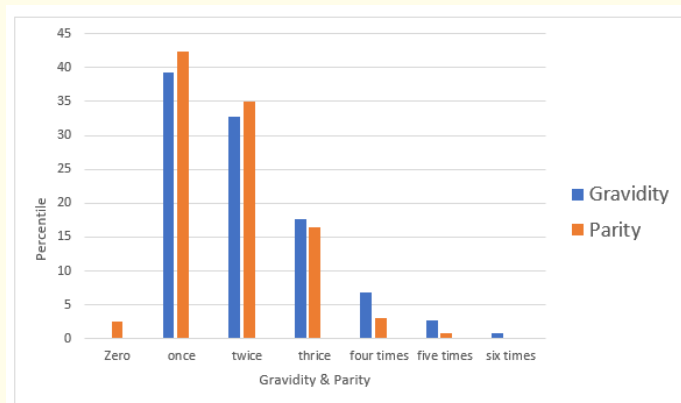


Figure 1: Women’s gravity and parity at selected governmental institutions in Addis Ababa, Ethiopia, in 2019.

Nearly half of women with a history of miscarriage (46.2%) received abortion care from government health institutions, followed by private clinics (35.9%) and traditional method (34.9).

Moreover, 11.5% of them didn’t get any abortion care service. The majority of participants (74.4%) said they had no problems after the abortion. The majority (15%) of the 20 women who experienced a post-abortion complication indicated that they experienced bleeding (Figure 2).

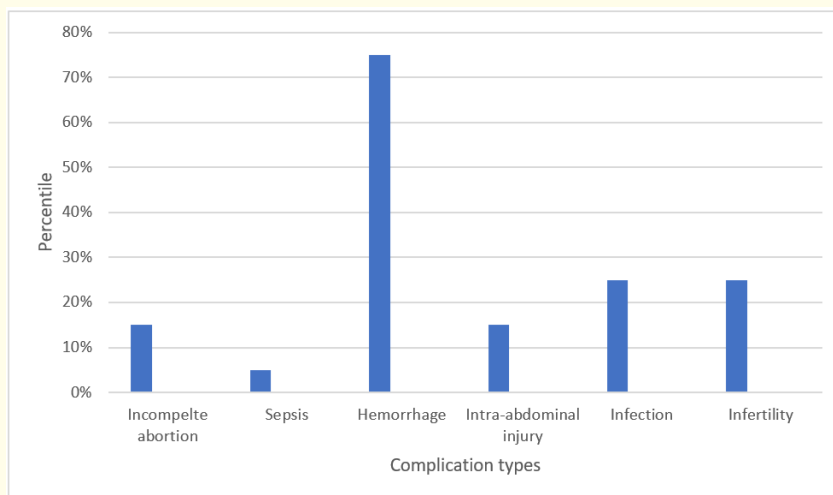


Figure 2: Depicts abortion complication types faced by women at selected public institutions in Addis Ababa, Ethiopia 2019.

Factors affecting women’s knowledge about safe abortion care service provision

Table 2 portrays about the factors those influenced women’s knowledge of abortion care service provision analysed by independent-samples t-test; and place of grew up significantly influenced their knowledge (p = 0.006). In addition, history of miscarriage and previous information of abortion care service were also very significantly associated with the knowledge of abortion care (p < 0.001).

Table 2: Factors influencing the knowledge of women about accessibility of safe abortion services at selected public institutions in Addis Ababa, Ethiopia 2019.

Variable		N %	t	P value
Place of grew up	Urban	79.9	-2.78	0.006
	Rural	20.1		
Pregnancy	Yes	60.2	0.84	0.401
	No	39.8		
Miscarriage	Yes	18.1	3.67	0.000
	No	81.9		
Previous abortion information	Yes	65.5	4.21	0.000
	No	34.5		
Abortion complications	Yes	4.62	1.27	0.21
	No	95.38		

The impact of marital status on levels of knowledge regarding abortion treatment was examined using a one-way between-groups analysis of variance (ANOVA). Participants were divided into three groups according to their status (Group 1: single; Group 2: married; Group 3: others). There was a statistically significant difference at the $p < .05$ level in total knowledge scores for the three marital groups: $F(2, 429) = 4.6, p = .042$. Despite reaching statistical significance, the actual difference in mean scores between the groups was quite small. The effect size, calculated using eta squared, was .015. However, post-hoc comparisons using the Tukey HSD test indicated that the mean score among all groups did not differ significantly from each other. Moreover, the analysis of variance showed that the effect of education and religion was not significant, $F(2, 423) = 1.35, p = .26$ and $F(2, 429) = 1.81, p = 0.165$ respectively.

Furthermore, the univariate linear regression model revealed that there is a significant difference in the score amid numbers of deliveries. Accordingly, we were 95% confident that for every additional number of delivery, the knowledge score increases somewhere between 0.043 and 0.78. The models did not show any significant differences in the score with age and number of pregnancy.

Multiple linear regressions were performed to assess the impact of a number of factors to predict a level of knowledge. R square statistic in the model explains 20.5% of the variance in the perceived knowledge. The number of delivery makes the strongest unique contribution to explaining the knowledge level recording a standardized beta value of 0.385, when the variance explained by all other variables in the model is controlled for. As shown in the table; the number of delivery, place of grew up, previous information on abortion and women encountered miscarriage made a significant unique contribution to the prediction of the knowledge level.

Table 3: The factors influencing women’s knowledge about accessibility of safe abortion care services at selected public institutions in Addis Ababa, Ethiopia 2019.

Variable	Beta (standardized)	P Value	Confidence interval		Collinearity statistics	
			Lower	Upper	Tolerance	VIF
Age	0.005	0.523	-0.070	0.076	0.650	1.537
Number of pregnancy	-0.357	0.940	-1.530	-0.307	0.219	4.574
Number of delivery	0.385	0.003	0.517	1.877	0.259	3.858
Place of grew up	-0.172	0.001	-2.011	-0.414	0.967	1.035
Previous information	0.188	0.003	0.451	1.787	0.982	1.018
Encountered miscarriage	0.258	0.001	0.827	2.359	0.802	1.247

Discussions

Women’s knowledge of safe abortion care service provision

The age of study participants ranged from 18 to 48 years, with an average age of 28.5 and among participants who reported as they had pregnancy majority of them were primigravida who have given one birth. In this study the respondents studied, 283 (65.5%) of them have heard of safe abortion care and media was the major source of information and this result was in line with the study in Bahir dar, Dessie and Mizan Tepi, Southwest Ethiopia [19-21].

Among women who had history of miscarriage in this study majority of them treated for complicated abortion in the governmental institutions which is in line with the study done in Colombia, United States, Nepal and Ethiopia [22-25].

Even though larger part of the participant's didn't face major complication less than one-third reported hemorrhage(bleeding)which is in line with the study result in Lagos State, Mozambique, Nepal and Nigeria [1,24,26,27].This study summarized that place of grew up significantly influenced participant's knowledge about safe abortion care provision that study in Ghana, Lagos State, Zambia and Kenya witnessed this result [1, 28-30]. History of miscarriage and previous information of abortion care service were also very significantly associated with the knowledge of abortion care which is in line with the study in Lagos State, Ethiopia and United States [1,25,31].

Additionally, post-hoc comparisons using the Tukey HSD test indicated that the mean score among all marital status groups did not differ significantly from each other to determine knowledge towards abortion care service provision that previous studies in different countries concluded as marital status affected women's knowledge towards abortion care service provision[32-34].

The linear regression models in this study revealed that a significant difference in the score amid numbers of deliveries towards safe abortion care provision knowledge. This finding is in line with the study result found in Sao Paulo, Brazil and Ethiopia [32,35]. In this study the models did not show any significant differences in the score with age which is opposing with the study done in Lagos State and Ethiopia that indicated age was a statistically significant association between the respondents and their knowledge of abortion [1,19].

Conclusions

This study concluded that woman's knowledge about accessibility of safe abortion provision was influenced by different factors in the selected non-health public institutions. Among these place of grew up, history of miscarriage, previous awareness of abortion, marital status and number of deliveries were statistically associated with knowledge of study participants.

Declarations

Ethics approval and consent to participate

Ethical clearance was obtained from the Research Ethics Committee (REC) of Addis Ababa University, College of Health Science. Permission from Addis Ababa city municipality, and then informed written consent of individual participants was obtained after being fully informed of the study purpose and procedures. During the consent process, they were provided with information regarding the purpose of the study, why and how they selected for this study, and the opportunity given to ask questions if they had. Participants also assured about the confidentiality of the information obtained from them during the data collection by not using personal identifiers and analysing the data in aggregates. Confidentiality and anonymity were ensured. No name or other identifying information included in the instrument.

Competing Interests

The authors declare no conflict of interest, financial or otherwise.

Availability of Data and Material

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

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Authors' Contributions

Sendo, EG, FA, and DG conceptualized and designed the study. JT, DG, and NG participated in the collection of data and statistical analysis. FA, NG, EG, JT, and DG interpreted the data. JT, FA, and EG drafted the first manuscript. Sendo, EG revised it critically for intellectual content.

All authors read and approved the final manuscript.

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