

# Health Care Providers' Perception and Associated Factors towards Safe Abortion in Selected Health Facilities in Adama, Ethiopia

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## Abstract

**Background:** Every year it is estimated that worldwide, from 210 million pregnancies, maternal deaths are 3,58,000 and unsafe abortions are estimated to be between 21 million and 22 million. Half of abortions globally are unsafe. Almost all of them occur in developing countries, with the higher number of deaths concentrated in Africa, especially Sub-Saharan Africa, and South Asia. Unsafe abortion is still common and demands a heavy toll on women in Ethiopia.

**Objective:** To assess health providers' perception and associated factors towards safe abortion in health facilities.

**Method:** Institution based cross-sectional study was conducted in March 2016, by using pre-tested and structured self-administered questionnaire. A total of 394 health providers were selected by systematic random sampling. Logistic regression was used to analyze the association between the dependent and independent variables.

**Result:** A total of 383 health care providers participated in the study making the response rate 97%. About 48% of the respondents were found to have favorable perceptions towards safe abortion care. Preference of current legislation and institutional regulation (AOR=6.902 [95% CI=3.553, 13.406]), access to quality abortion service (AOR=6.628 [95% CI=2.122, 20.698]), preference of full legalization to safe abortion (AOR=8.862[5.008, 15.682]) and availability of adequate and functional equipment in the facilities (AOR=2.270[95% CI 1.245, 4.141]) were significantly associated with perceptions of health care providers towards safe abortion.

**Conclusion:** Health care providers' perception toward safe abortion care services was low. Therefore, sensitizing health providers about the essential nature of safe abortion services and the law governing abortion and equipping health facilities with essential supplies and accessibility of safe and legal termination of pregnancy are mandatory.

**Keywords:** Abortion; Health care; Pregnancy; Public health; Reproductive age

## Introduction

Unsafe abortions are of major public health significance. Half of abortions globally are unsafe or estimated to be between 21 million and 22 million, therefore around one in ten pregnancies ends in an unsafe abortion. Almost all of them occur in developing countries, with the higher number of deaths concentrated in Africa, especially Sub-Saharan Africa, and South Asia. At the same time, there is a global shortage of health care providers with many countries prioritizing scarce human resources for a variety of pressing health problems. Therefore, there is a general consensus among various bodies that legalization of abortion is central in preventing the suffering and death of women [1,2]. Unsafe abortion is still common and demands a heavy toll on women in Ethiopia and 382,000 induced abortions occurred in 2008 and abortion rate is 23 per 1,000 women in reproductive age; 11-15 abortions occurred per 100 live births [3]. To address the large number of maternal deaths caused by unsafely performed abortions, as

part of law reform in Ethiopia in 2005, the penal code was revised to broaden the indications under which abortion is permitted. Termination of pregnancy by recognized medical institution within the period permitted by the profession is not punishable or legal when the pregnancy results from rape or incest, when continuation of the pregnancy endangers the health or life of the woman or the fetus, in cases of fetal impairment, for women with physical or mental disabilities, for minors who are physically or psychologically unprepared to raise a child and in cases of grave and imminent danger that can be averted only through immediate pregnancy termination. A second, related change was made on 2006 publication, to "translate the law into actionable measures" and to inform "women, health professionals, law enforcement agencies and all sectors of society" about implementation of the law [4].

In addition to serious negative health consequences, unsafe abortion also has a severe economic impact, especially in poor countries with already overburdened health systems. Direct costs include skilled personnel, medications, blood, supplies, equipment's and hospitalization expenses associated with treating women who suffer complications of unsafe abortion [5,6]. The outcome of complications

of unsafe abortion depends not only on the availability and quality of emergency abortion care, but also on a women's willingness to turn to medical services, and the readiness of medical staff to deal promptly with the complications. Even where abortion is legally permitted, technical and policy barriers related to healthcare personnel, facilities, medical equipment and supplies, and other factors commonly inhibit access to safe abortion care [1]. Many women needing abortion care are in vulnerable situations that make it difficult for them to exercise autonomous decision making. In some settings, health providers may agree to provide an abortion only in exchange for high fees or insist the woman to use a particular contraceptive method, including sterilization and some healthcare workers' negative attitudes and even punitive treatment towards women seeking safe abortion and others' refusal often on grounds of conscientious objection to provide in abortion care. A woman's access to services is determined in part by positive attitudes of health care providers for the better abortion related services in order to reduce maternal mortality and morbidity [5,7-9].

From the five top causes of maternal deaths in Ethiopia, one is abortion. The prevalence rates of abortion in general and induced abortion in particular are very high, 14.3% and 4.8%, respectively. To achieve a three-fourth decline in Maternal Mortality Rate (MMR) and to decrease the proportion of abortion-related deaths from 32% of all maternal deaths to 10% as set by Millennium Development Goal (MDG) plan, again about half a million pregnancies are estimated to end in abortion each year in Ethiopia indicating the need of comprehensive abortion care [10-13]. Increasing access to Comprehensive Abortion Care (CAC) requires careful consideration and understanding of the multilayered physical, legal, political, economic and cultural context of women's daily lives. Social status, level of education, community norms, standards, expectations and limited health services are all factors that determine the choices women have and their ability to exercise their right to make decisions relating to reproductive health. Two critical aspects of improving implementation of CAC are raising awareness and increasing access to resources for both women and health care providers [14]. Therefore this study designed to assess perception of health care providers towards safe abortion service and associated factors.

## Methodology

### Study setting and design

The study was conducted in Adama town, Oromiya Regional State which is found 100 km away from Addis Ababa to the east. According to the 2007 census by Central Statistic Authority (CSA) the town has a projected population of 337,556. There are 4 hospitals (1 government hospital and 3 private hospitals), 4 public health centers and 2 Non-Governmental Organization health facilities which are giving safe abortion services. The study involved both private and public health institutions in Adama which were providing safe abortion services. A facility based cross-sectional quantitative study design was used in March 2016.

### Population and sampling

All health care providers who were working in Adama town health facility were source population and health care providers who were available during data collection time in selected institution were study population.

### Sample size estimation

Single population proportion formula was used to determine the minimum sample size considering 95% confidence interval, margin of error 5% and 37% prevalence of positive attitude of health care providers towards safe abortion [15].

$$n=(Z\alpha/2)^2p(1-p)/d^2$$

$$n=(1.96^2)0.37(1-0.37)/(0.05)^2$$

$$n=(3.8416) (0.2331)/0.0025=358$$

Where: n=Initial minimum sample size;  $Z\alpha/2$ =Z value at 95% CI [1.96]; p=Estimated prevalence rate is 37%; d=Margin of error tolerable is 5% [0.05]; By considering 10% (36) non response rate, the total sample size was 394 health providers.

### Sampling technique

The study was conducted in ten selected health institution of Adama town. After proportional allocation of health care providers for each health institutions, samples of health care provider were selected by systematic random sampling (SRS) method.

### Study variables

- **Dependent variables:** Perception of health care providers.
- **Independent variables:** Individual factor: Education, experience, religion; Environmental factor: Law/policy (safe abortion liberalization), socio cultural issue; Institutional factor: Health facility policy and regulation, availability and accessibility of equipment's and supplies, type of health sector level of activity, availability of reference, availability of trained provider.

### Data collection procedures

The study had employed self-administered questionnaires. The questionnaire was taken from other two similar study conducted in different part of Ethiopia [15,16]. The data collectors and supervisors were given training on how to collect the data, objective and method of the study and on issues of confidentiality and rights of respondents. A copy of the questionnaire was submitted to the expert to examine whether the number and type of items in the questionnaire measured the concept or construct of interest (objective of the study).

### Data quality control

Before the actual data collection the questionnaires were pre-tested on 5% of the total sample size on similar health care providers groups in different facilities which is not sampled institution. Based on the findings of the pre-test, there were some modifications was made on the tool before administration to actual study participants. Data collectors were instructed to check the completeness of each questionnaire whether each and every question was completely answered and also the supervisors and principal investigator were recheck the completeness of the questionnaire immediately after submission.

### Data processing and analysis

The questionnaire were cleaned, coded and entered into EPI data version 3.1. Then the data was exported to SPSS version 21 for cleaning and analysis. The descriptive analysis was used to determine frequency

distribution, proportions and percentage. Logistic regressions were carried out between dependent and independent variables to determine their associations at 95% confidence interval.

### Operational definitions

**Perception:** Refers to the participants' response as favorable or unfavorable attitudinal statement towards safe abortion care.

**Favorable responses:** Agreeing with the positive statements (respondents those answer greater than mean attitude score considered as favorable attitude).

**Unfavorable responses:** Disagreeing for positive statement (respondents those answer with a score below mean attitude score considered as unfavorable attitude).

**Health care provider:** Also known as health personnel, those professionals were Obstetrics and Gynecology specialists, Surgeons, General practitioner, Residences, Nurses, Midwives and Health officer.

**Mean attitude score:** the average of response on the attitudinal questions.

## Results and Discussion

### Socio-demographic characteristics

From total of 394 study participants about 383 of health care providers were participated in the study which makes response rate 97%. Among participants in the study, more than half, 225(58.7) were female and the median age of respondent was 29 years. About 229(59.8%) of the respondents were currently married. Of all respondents, 223 (58.2) were orthodox followers and 219(57.2%) of the respondents primary work place were government. From participants 191(49.9%) were nurses. About 65% of the respondents had less than or equal to 5 years of work experience (Table 1).

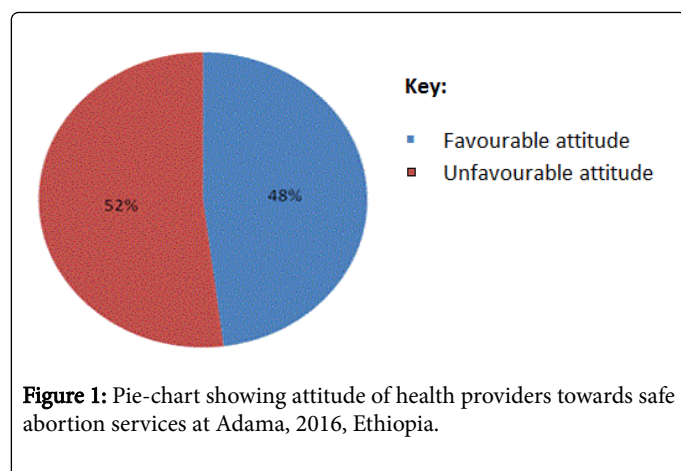
Variable	Frequency	Percentage
Sex		
Female	225	58.7
Male	158	41.3
Age		
15-24	23	6
25-34	291	76
35-44	69	18
Marital status		
Never married	146	38.1
Married	229	59.8
Divorced	7	1.8
Widowed	1	0.3
Religion		
Orthodox	223	58.2
Muslim	80	20.9
Protestant	73	19.1
Others	7	1.8
Profession		
Obstetrics and Gynecology specialist	8	2.1
General practitioner	39	10.2
Midwife	93	24.3
Health officer	46	12
Nurse	191	49.9
Emergency surgery	6	1.6

Year of professional experience		
Less than one year	35	9.1
1-3 years	89	23.2
3-5 years	125	32.6
6-10 years	84	21.9
More than 10 years	50	13.1
Primary work place		
Government hospital	175	45.7
Private hospital	135	35.2
Government health center	44	11.5
NGO health institution	29	7.6

**Table 1:** Socio-demographic characteristics of study participants, 2016, Adama, Ethiopia.

### Attitude of health providers toward safe abortion care services

The study revealed that 184 (48%) of them had a favorable attitude towards safe abortion care services (Figure 1).



### Views of respondents according to their attitude towards different characteristics of safe abortion

The respondents were asked to state their reasons why they are not comfortable working in site where safe abortion was done and their response were religion (42.3%), followed by personal value (15.1%). On the other hand, the respondents were asked about why they chose for legalization of safe abortion, and the majority of the respondents (44.6 %) said because it reduces morbidity and mortality which would occur due to unsafe abortion. The primary anticipated problem if abortion was fully legalized were, fear of opposition from religious group which account (82.8 %). Health care providers also asked their reason why they oppose fully legalization of safe abortion, and majority of them (88.8%) said it's due to their religion factors. Moreover, the respondents were asked to suggest conditions under which women should not be allowed to terminate their pregnancies. More than 4 of the respondents believed that the service should not be rendered for married women (Table 2).

Variables	Frequency	Percent (%)
Reason of respondents' not comfortable working in a site where abortion is done*		
Outside of their scope of practice	31	8.1
Against religious practice	162	42.3
Against personal value	58	15.1
Didn't have opportunity to trained	19	5
Reason for preference of legalization of safe abortion*		
Abortion is a health problem in our area	102	26.6
Facilitate to get service in safe area and trained provider	139	36.3

Reduce mortality and morbidity occur due to unsafe abortion	171	44.6
Solve problems of unwanted pregnancy	108	28.2
Reduce cost for inducing abortion	71	18.5
Reason for not opting to a full legalization safe abortion*		
My religion does not allow	165	43.1
Culturally not accepted	51	13.3
Homicide	80	20.9
Encourage to have unwanted pregnancies	52	13.6
Encourage pre/extra marital sex	46	12
Anticipated problem if abortion is fully legalized*		
Opposition from religious group	317	82.8
Opposition from the whole community	84	21.9
Opposition from the part community	159	41.5
Lack of trained man power	186	46.8
Lack of adequate service provision facilities	132	34.5
Shortage of fund	56	12
Reason of providers for not legalized safe abortion*		
Religion	340	88.8
Culture	176	46
Lack of facility/provider	165	43.1
Poverty	51	13.3
Women who were not allowed to have safe abortion*		
All women	46	12
With no medical indication	153	39.9
Married women	155	40.5
Unmarried woman	30	7.8
Student	42	11
Victims of incent	48	12.5
Victims of rape	72	18.8
Very young women	61	15.9
All should be allowed	61	15.9
Who else should involve in decision making, for women*		
Health provider	97	25.3
Partner/family	145	37.9

**Table 2:** Views of respondent according to their attitude towards different characteristics, 2016, Adama, Ethiopia (\*total do not added to 100% because of multiple responses).

### Factors associated with health care providers' attitude

Independently being male and being Physician/Ho were more likely had favorable attitude than their counterparts (COR=1.689[1.121-2.546]) and (COR=1.678[1.057-2.663]) respectively and participants who were works where there were trained

staff in the facility, availability of essential supplies and drugs in the facility and ready facility to give safe abortion were more likely had favorable attitude when compared to their counterparts (COR=1.849[1.215-2.816]), (COR=2.920[1.898-4.492]) and (COR=3.531[2.190-5.695]) respectively.

Variable	Favorable attitude score	Crude OR (CI)	Adjusted OR (CI)
<b>Sex</b>			
Female	96(42.7)	1	1.286(0.720-2.298)
Male	88(55.7)	1.689(1.121-2.546)	
<b>Profession</b>			
Nurse/midwife	127(44.7)	1	1.721(0.867-3.415)
Physician/Ho	57(57.6)	1.678(1.057-2.663)	
<b>Preference of current legislation and institutional regulation</b>			
No	17(11.9)	1	6.902(3.553-13.406)*
Yes	167(69.6)	16.956(9.529-30.171)	
<b>Access to quality abortion service is a key step to reduce unsafe abortion</b>			
No	5(8.1)	1	6.628(2.122-20.698)*
Yes	179(55.8)	14.370(5.612-36.80)	
<b>Preference to safe abortion legalization</b>			
No	34(17.5)	1	8.862(5.008-15.682)*
Yes	150(79.4)	18.0(10.858-30.171)	
<b>Availability of adequate and functional equipment in the facility</b>			
No	43(30.9)	1	2.270(1.245-4.141)*
Yes	141(47.8)	3.056(1.968-4.747)	
<b>Availability of well trained staff in the facility</b>			
No	56(38.6)	1	0.791(0.363-1.726)
Yes	128(53.8)	1.849(1.215-2.816)	
<b>Availability of essential supplies and drugs in the facility</b>			
No	48(32.2)	1	1.734(0.803-3.746)
Yes	136(58.1)	2.920(1.898-4.492)	
<b>Facility readiness to give safe abortion</b>			
No	31(27.2)	1	0.189(0.500-2.831)
Yes	153(56.9)	3.531(2.190-5.695)	

**Table 3:** Multivariate analysis for attitude of health care providers' (\*statistically significant at 95% confidence interval).

Preference to fully legalization of safe abortion and preference of current legislation and institutional regulation of safe abortion associated with attitude of health care providers towards safe abortion (AOR=8.862 [95% CI=5.008-15.682]) and (AOR=6.902 [95% CI=3.553, 13.406]) respectively. Accordingly, those who said access to quality abortion service is a key step to reduce unsafe abortion and

where there were adequate and functional equipment in their facility associated with attitude of health care provider providers towards safe abortion (AOR=6.628 [95% CI=2.122-20.698]) and (AOR=2.270 [95% CI=1.245-4.141]) respectively. Our study results reveals 48% of providers had favorable attitude towards safe abortion. This was inconsistent with a study done in Mekele town which was 94.8% [16].



This difference might be due to setting difference and the study done in Mekele included only four public hospitals while our study had ten all levels of governmental and private facilities. But, this result was nearly in line with the study done in East Gojam Zone which was 56.7% [17]. This similarity might be due to both studies were done within one year deference and they incorporated both hospitals and health centers.

The vast majority of health care providers (91.9%) believed complications of unsafe abortion, including mortality was a "very serious" health problem in their setting, 87.7% of providers also agreed that access to safe abortion services could reduce maternal mortality and 83.8% agreed with expansion of access to quality of safe abortion services was a key step to reducing unsafe abortion. This result is slightly greater than study done on how provider attitudes towards abortion can impact the quality and access to abortion services in 6 Latin American and Caribbean Countries [18]. This might be due to setting and study time difference. Reasons of health care providers' not comfortable working in site where safe abortion was done were due to religious grounds, personal value, out of their scope of practices and lack of training (42.3%, 15.1%, 8.1 and 5%) respectively. This study result is also in line with the study done in Nepal, Ghana and Addis Ababa [15,19,20]. Those health care providers who were against the law, said that religious reason, cultural reason, lack of trained provider and lack of facility were the main factors to be against the law. The result was nearly similar with a study done at Mekele town and Addis Ababa [15,16]. This similarity might be due to these studies were done in urban facilities.

The respondents were asked to forward their agreement or disagreement on whether or not the woman herself should decide to have a legal abortion and 46.5% agreed, whereas 53.5% of respondents disagreed. This was similar with the same study done in Addis Ababa which shown 55.1% of respondents disagreed with the idea of women themselves should decide to have safe abortion [15]. This similarity might be due to both studies were done on nearly similar population characteristics. After adjustment of logistic regression the study have shown that those who preferred full legalization of safe abortion were found to had more favorable attitude compared to those who don't prefers full legalization of safe abortion (AOR=8.862 [95%=5.008, 15.682]). This result was in line with the study done in East Gojam, Ethiopia [17]. This might be due to both studies included both hospitals and health centers and the study period was not far apart.

Health care providers who prefers current legislation and institutional regulation to safe abortion found to had more likely favorable attitude than who don't prefer current legislation and institutional regulation to safe abortion (AOR=6.902 [95% CI=3.553, 13.406]) and the study participants who agreed with concept of access to quality abortion service as a key step to reduce unsafe abortion, found to had seven times more favorable attitudes than those who didn't agree (AOR=6.628 [95% CI=2.122, 20.698]). Moreover; health care providers working in a facility where there were adequate and functional equipment in the facility had more favorable attitude than those health care providers working in the health facilities where there were no adequate and functional equipment (AOR=(2.270 [95% CI=1.245, 4.141])). For the last three associated factors (variables) other studies were tested them and there were no studies found their association, but in this study these variables were associated as indicated above.

## Ethical Considerations

Ethical clearance was obtained from institution review board (IRB) of Addis Ababa University, College of health science, School of allied health sciences, department of Nursing and Midwifery. Then formal letter of cooperation was written concerned bodies. Each study participant was adequately informed about the purpose, method, anticipated benefit and risk of the study. Informed voluntary written and signed consent was obtained from each study participants. Confidentiality and cultural norms of study participants were maintained. 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

From the study findings the following conclusions are drawn: Health care providers had low favorable attitudes towards safe abortion care. The finding also revealed that quality of safe abortion care, availability of basic supplies and functional equipment, preference to current legislation and institutional regulation of safe abortion and preference to fully legalization of safe abortion found to be significantly associated with providers' attitude toward safe abortion services.

## Limitations

Ministry of health should increase health care provider awareness toward safe abortion and its importance in reducing maternal morbidity and mortality. The ministry should also equip the institutions with necessary supplies and have to increase number of trained health care providers. Moreover, the government should strengthen the existing abortion legislation of the country and support health care providers on its implementation. Further qualitative study should be done on perception of health care provider and associated factors.

## Competing Interests

The authors declare that they have no competing interests.

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## Authors' Contributions

YS designed the study, performed the statistical analysis and drafted the manuscript. BH and KS participated in the study design, implementation of the study, and contributed to the draft manuscript. All authors contributed to the data analysis, read and approved the final manuscript.

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