

**KNOWLEDGE, ATTITUDE AND PRACTICE OF HEALTH CARE WORKERS
TOWARDS SAFE ABORTION AND ITS ASSOCIATED FACTORS AT
TERTIARY HEALTH FACILITY IN ADDIS ABABA, ETHIOPIA, 2021: CROSS
SECTIONAL STUDY**



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**A RESEARCH THESIS TO BE SUBMITTED TO ST PAUL'S HOSPITAL AND
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ABSTRACT

Background: For many Ethiopian women, unsafe abortion is still a reality, and it will remain so until safe abortion is more widely available. However, there is no similar study done so this study was conducted on knowledge, attitude and practice of health care workers towards safe abortion and its associated factors at Tertiary health facility, Addis Ababa, Ethiopia, 2021.

Method: Cross-sectional Study was conducted among obstetrics and gynecology department Health care Workers including midwives, clinical nurses, General Practitioners Obs/gyne Residents, and Consultants between May 2021 and July 2021. Participants were selected using convenient sampling and data were collected using structured pre tested self-administered questionnaire. For data entry, cleaning, and analysis, SPSS version 23 was utilized. The results were presented using frequency tables, percentages, mean, odds ratio and 95% confidence limits.

Result: A total 187 of health care workers participated in the study making the response rate 94.4%. About 73.8%, 52.4%, 49.2% of health care workers had Good knowledge, Positive attitude and Good practice respectively. Level of profession [(Medical doctor (AOR=30; 95% CI=8.6-104.8) ,Midwife (AOR=6; 95% CI=2.1-16.8)], Religion [(Muslim (AOR=0.29; 95% CI= (0.1-0.8) & Year of clinical experience above 3year(AOR=2.9; 95% CI = (1.1-8.3)] and Level of profession [(Medical doctors(AOR=14; 95% CI=2.4-80.1), Midwife(AOR=45; 95% CI=7.9 - 255.1) & Age of respondents above 25 year(AOR=3.5; 95% CI=1.3-9.5)] were significantly associated with Knowledge, attitude and practice of health care workers towards safe abortion respectively.

Conclusion: The majority claimed to be aware of existing abortion law. Providers' knowledge of abortion was explained in part by their profession. Religious issue and having the experience have impact on how providers felt about safe abortion. The practice of SAC was also influenced by level of profession and age of respondents. Pre/on-service training, for example, is needed to improve the knowledge of Nurses and practice other health care workers about abortion.

Keywords: Safe abortion, knowledge, attitude, practice, health care workers.

INTRODUCTION

Nearly half of all abortions (21.6 million) are unsafe, with nearly all (98 percent) taking place in developing nations(1) .In developing nations, unsafe abortion is still a major public health issue. At least 13% of global maternal mortality is due to unsafe abortion, and 95% of unsafe abortions occur in underdeveloped countries where abortion is prohibited by outdated legislation(2).

An estimated number of 382,500 induced abortions were performed in Ethiopia; among induced abortion, only 27% of abortions (some 103,000 abortions) had safe procedures performed in health facilities(1, 3). The health risks of abortion depend on whether the procedure is performed safely or unsafely(2). According to WHO, unsafe abortion remains one of the four leading causes of pregnancy-related death, disabilities and injuries around the world, along with hemorrhage, infection and high blood pressure in connection with childbirth(4, 5). WHO estimates that in Eastern Africa, unsafe abortion accounts for one in seven maternal deaths(4). Every day, more than 128 women die from complications of unsafe abortion(4, 5). Ethiopia has the fifth highest number of maternal deaths in the world: One in 27 women die from complications of pregnancy or childbirth annually(5, 6).

Because of the high prevalence of unsafe abortion among women, healthcare professionals, such as doctors, nurses, and female health workers, must pay greater attention. They may be able to recognize erroneous procedures, assess women's conditions, and be sympathetic to their concerns because they are on the front lines of care. As a result, it's critical that healthcare workers have the information and skills necessary to deliver safe and competent treatment (6).

Where some services are available, limited resources, lack of adequate trained health provider, lack of equipment, inadequate provision of contraceptives, lack of awareness, cultural stigma, and over all poor socioeconomic status further limit women's access to quality care. In such environment providers may have little training and experience with methods of termination of pregnancy, which can translate into poor quality information, and counseling(2, 5, 7).

Knowledge of the law is essential so that providers not only know what is expected of them but can also inform and educate women and community at large(8).

The national guideline under the subtitle of “provider's skills and performance” clearly underlines the importance of providing basic knowledge and skills to health providers on regular

basis in order to maximize their effectiveness to provide the service and manage abortion and its complications(9).

Since there was no similar study conducted to assess Health care workers knowledge, attitude and practice towards safe abortion provision in the study area at SPHMMC, it is timely and important to assess knowledge, attitude and practice of HCWs' towards safe abortion and its associated factors. In addition to this, the finding of this research will be used as a baseline finding to support future research work and programs. Also the findings of this study will help in evaluation of the quality of safe abortion care provided for women specifically in a tertiary hospital like SPHMMC and can serve as first step in planning and designing effective SAC programs to address the problem and its consequences.

Methods

Study Design, Area and Period

A facility based descriptive cross-sectional study was conducted at Obgyn department, SPHMMC, Addis Ababa, capital city of Ethiopia. SPHMMC is one of the tertiary referral hospitals directly under the federal ministry of health. The hospital gives service to 200,000 people annually who are referred from all corners of the country. It gives service under different clinical disciplines which include obstetrics and gynecology; provides abortion and family planning-related services. Around 1500 women receive abortion care in the hospital annually (10).

The data were collected from May and July 2021. The study populations were all OBGYN department Health care workers; Nurse, Midwife, residents, General Practitioners and Specialists working at SPHMMC during the study period. We included all Health care workers' who requested and gave written informed consent to participate in the study. We excluded those HCW's on month off and sabbatical leave.

Sample Size and Sampling Procedure

The sample size was determined for Knowledge, attitude and practice using the single population proportion formula($n = \frac{Z^2 p(1-P)}{d^2}$) taking a P-value of 0.53% which provide largest sample size from study done in Addis Ababa health center with Good Knowledge 53.1%(11). Using power of 80%, adding marginal error of 5% and contingency rate the estimated sample size was 421.

However the total numbers of Health care worker at OBGYN department were 344, which is below 10,000 we used correctional formula($nf=n/1+n/N$) with 10% non-response to get total minimum sample size 199. The health care were stratified according to their level of profession then Convenient Sampling were used to determine study participants.

Abortion used in this study based on the following definition - termination of pregnancy before fetal viability which is less 28 weeks of gestation according to revised technical and procedural guideline on safe abortion service, and penal code(8, 9).

Health care workers (HCWs) used in this study includes; Nurse (BSC), Midwives (BSC), General practitioners, OBGYN Residents and Specialists.

Health care workers Knowledge, attitude and practice operationally defined. Knowledge of HCW's was measured with a total of 10 questions with yes or no and multiple response choice with total score of 18. Providers who scored above the mean=14 on knowledge questions considered Good knowledge(11, 12).

Attitude of HCW's was measured with a total of 6 questions with total score of 30 with possible five point Likert scale responses ranging from "strongly disagree" to "strongly agree". The strongly disagree was scored as one and strongly agree scored as five in a positive statement whereas the score was reversed in negative statements. Providers who scored above the mean=18.5 considered to have positive attitude on safe abortion respectively(11, 12).

Practice of HCW's was measured with a total of 5 questions with yes or no and multiple response choice with total score of 12. Based on the overall mean score, those who scored above the mean =5.5 were considered Good practice towards safe abortion(12).

Data collection Procedure and Instrument

The study was conducted using self-administered structured questionnaire that was designed by reviewing previous similar studies in such a way that consists all the variables that can meet the objectives of the study(11, 12). The data collections was conducted by two data collectors Midwife (BSC) and trained on interviewing, information retrieval and filling of the questionnaires. The questionnaire was pre-tested prior to data collection at SPHMMC on 10 respondents and appropriate modifications were made to ensure the data quality.

All data were collected and stored anonymously. All filled questionnaires were checked daily for completeness, accuracy, and consistency by the principal investigator. Supervision was carried out by the principal investigator throughout the data collection.

There were four outcome variables. The first was Knowledge about current abortion law and revised technical and procedural guideline on safe abortion services in Ethiopia. The second and third outcomes were attitude toward safe abortion and practice of safe abortion services respectively. The last variable was factors which affect knowledge, attitude and practice of HCWs' on safe abortion

Data Processing and Analysis

Completed items were coded. The coded questionnaires were entered to SPSS version- 23 used for data entry, cleaning and analysis.

Socio demographic characteristics of the participants and their level of awareness on Safe abortion were described using descriptive statistics; simple frequency, Percentage and mean.

Bivariable and Multivariable logistic regression was used to identify independent factors associated with the Knowledge, attitude and practice of HCW's for safe abortion.

Bivariate analysis was carried out first to observe the crude association between independent and outcome variables. The variables with P value < 0.25 in bivariate analysis were considered as candidate variables for the multivariable model. Finally, statistically significant variables that fit the final regression model were identified using the odds ratio with a 95% confidence interval and P value < 0.05. The results are presented using frequency tables, percentages, means, odds ratio and 95% confidence limit

Ethical consideration

After getting Ethical clearance & permission letter were obtained from St Paul's Hospital millennium Medical College, the Institutional Review Board (IRB) of the researcher's institution to undertake the study Ref. no. (PM23/481). Written consent was taken from each participant. Confidentiality maintained at all levels of the study.

RESULTS

Out of 199 self-administrative questionnaires distributed 187 respondents completed the administered questionnaire and returned. Therefore, data analysis was made based on 187 cases that had completed the interview. The response rate was 94.4%.

Socio-demographic characteristic

Among the respondents 82 (43.9%) were females. Ninety (48.1%) of participants were in the age range of 25-29 years and the mean age was 27.8 ± 3.51 , range (21–42 years). Two-third of the respondents 128 (68.4%) were single, 129 (69%) were Orthodox Christian in religion and 109 (58.3%) were female participants. Among respondents Eighty six (46.0%) were Medical Doctors, 73 (39%) were BSc Midwives and 28 (15%) were BSc Nurses. Seventy (37.4%) of participants had work experience of 1–3, 46 (24.6%) had 3-5 year of experience. (Table 1)

Table 1 Socio -demographic characteristics of health care Workers at Addis Ababa, August 2021

Characteristics N=187		Frequency	Percentage (%)
Sex	Male	78	41.7
	Female	109	58.3
Age	<25 Years	43	23
	25 – 29 Years	90	48.1
	30 – 34 Years	30	16
	>35 Years	24	12.8
	Orthodox	129	69.0
Religion	Muslim	26	13.9
	Protestant	19	10.2
	Catholic	13	7.0
Marital status	Single	128	68.4
	Married	59	31.6
Profession	Nurse(BSC)	28	15.0
	Medical Doctors ^a	86	46.0
	Midwife(BSC)	73	39.0
	< 1 Year	32	17.1
Year of Professional experience	1 – 3 Year	70	37.4
	3 – 5 Year	46	24.6
	5 – 10 Year	26	13.9
	>10 Year	13	7.0

^a include: obs/gyne specialist, Resident, General practitioner

Health Care Workers Knowledge about Safe abortion care

Regarding to definition of abortion, 168 (89.8%) of the respondents knew the definition as it defined in the revised abortion law and federal ministry of health of Ethiopia (FMoH) guideline termination of pregnancy before fetal viability (< 28 weeks) and 98.4% said they knew what safe abortion means. (Table 2)

Regarding knowledge on the pregnancy termination procedures, 88.2% were familiar with manual vacuum aspiration (MVA), using mifepristone and misoprostol (95.2%), 67.4% dilation and curettage (D&C) and 79.1% Dilation and Evacuation (D&E). One hundred and forty one (75.4%) of health care workers were familiar with the revised abortion law, of them, 169 (90.4%) said termination of pregnancy should be performed in equipped health facilities and trained staffs who are authorized to perform procedure. (Table 1)

Concerning safe termination of pregnancy according revised law 149 (79.7%) of health care providers' didn't require evidences to give termination of pregnancy due to rape or incest. While, 28 (15%) said women should submit evidence to get the service even the law said no requirement of evidences. (Table 2)

Related to consent for the procedure 175 (93.6%) said the provider should secure informed consent for the procedure using standard consent form. About 90.9% of health care providers reported that they knew components post abortion care (PAC). (Table 3)

Table 2 Health care workers knowledge on definition of abortion, safe abortion and procedures, revised abortion law and post abortion care Addis Ababa, August 2021

Characteristics	N (%)
Definition of abortion N=187	
Termination of pregnancy < 20 weeks from LNMP	12(6.4)
Termination of pregnancy < 24 weeks from LNMP	7(3.7)
Termination of pregnancy < 28 weeks from LNMP	168(89.8)
Knew safe abortion N=187	
Yes	184(98.4)
No	3(1.6)
Types of procedures they knew ^a N=617	
Manual Vacuum Aspiration (MVA)	165(88.2)
Using mifepristone and misoprostol	178(95.2)
Dilation & curettage (D&C)	126(67.4)
Dilation & Evacuation (D&E)	148(79.1)
Familiar with the revised abortion law N=187	
Yes	141(75.4)

No	46(24.6)
For what reason abortion is legalized in Ethiopian context ^a	
N=743	
Not allowed for any reason	3(1.6)
Rape or incest	172(92.0)
If pregnancy endangers the health or life of the women or fetus	175(93.6)
In case of fetal major anomalies	162(86.6)
For women with physical/mental disabilities	153(81.8)
She is financially unable to support the child or she does not want the child	59(31.6)
When the pregnancy is the result of extra Marital	19(10.2)
Place for terminating pregnancy N=187	
Equipped health facilities that aren't authorized to perform the procedure with no trained staff	4(2.1)
Non-Equipped health facilities that aren't authorized to perform the procedure with no trained staff	3(1.6)
Equipped health facilities and trained staff authorized to perform the procedure	169(90.4)
I don't know	11(5.9)
Requirement from a woman for termination of pregnancy due to rape or incest N=187	
Requires to submit evidences	28(15.0)
Aren't required to submit evidences	149(79.7)
I don't know	10(5.3)
The provider has to secure informed consent for procedure using standard consent form N=187	
True	175(93.6)
False	12(6.4)
Know post abortion care N=187	
Yes	170(90.9)
No	17(9.1)
Referral arrangements for social support and care are an integrated part of abortion care N=187	
True	168(89.8)
False	19(10.2)

^a not 100% due to Multiple answers

Total Knowledge score of HCWs and associated factors

Majority (73.8%) of the respondent have good knowledge while 26.2% had poor knowledge.

Respondent's Professional was statistically significant association with mean knowledge score ($p < 0.05$). The mean knowledge score of Midwives and Medical doctors were 6 times and 30 times more likely to have good knowledge above the mean than Nurse (AOR=6; 95% CI=2.1-16.8); $P=0.001$) and (AOR=30; 95% CI=8.6 -104.8); $P=0.000$ respectively. (Table 3)

Table 3 The Bivariate and Multivariate logistic regression Result on factors Associated with health care workers Knowledge towards safe abortion, Addis Ababa, August 2021

Variables	Good knowledge Number (%)	Poor knowledge Number (%)	Crude OR (95% CI)	P=Value	Adjusted OR (95% CI)
Profession					
Nurse(BSC)	8(5.8%)	20(40.8%)	1		1
Midwife(BSC)	51(37.0%)	22(44.9%)	5.8(2.2-15.1)	0.001	6.02(2.1-16.9)**
Medical Doctors	79(57.2%)	7(14.3%)	28.2(9.1-87.06)	0.000	30.1(8.7-104.9)**
Age (Years)					
<25 Years	27(19.6%)	16(32.7%)	1		1
25 – 29Years	68(49.3%)	22(44.9%)	1.8(0.83- 4.0)	0.342	0.52(0.13 -2.0)
30 – 34Years	25(18.1%)	5(10.2%)	2.9(0.95- 9.3)	0.253	0.46(0.12 – 1.73)
>35 Years	18(13.0%)	6(12.2%)	1.8(0.58-5.4)	0.332	0.42(0.074 -2.40)
Years of experiences					
< 1Year	24(17.4%)	8(16.3%)	1		1
1 – 3 Year	53(38.4%)	17(34.7%)	1.04(0.39-2.7)		
3 – 5 Year	33(23.9%)	13(26.5%)	0.85(0.30-2.4)		
5 – 10 Year	18(13.0%)	8(16.3%)	0.75(0.24-2.4)		
>10 Year	10(7.2%)	3(6.1%)	1.1(0.24-5.1)		
Gender					
Female	72(52.2%)	37(75.5%)	1		1
Male	66(47.8%)	12(24.5%)	2.8(1.3- 5.9)	0.076	0.47(0.21 -1.1)
Marital status					
Single	96(69.6%)	32(65.3%)	1		1
Married	42(30.4%)	17(34.7%)	0.82(0.41-1.6)		
Religion					
Orthodox	95(68.8%)	34(69.4%)	1		1
Muslim	18(13.0%)	8(16.3%)	0.80(0.3 -2.02)		
Protestant	16(11.6%)	3(6.1%)	1.9(0.5- 6.9)		
Catholic	9(6.5%)	4(8.2%)	0.80(0.2-2.8)		

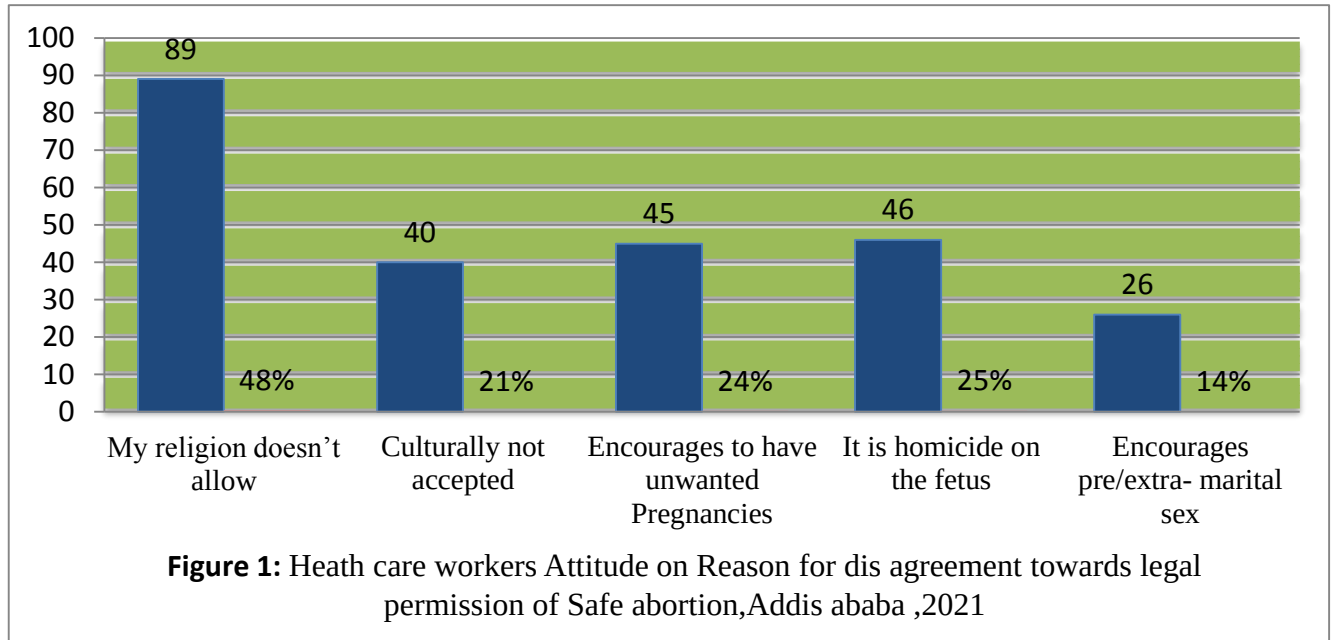
NB: **p-value<0.05

Attitude of Health care Worker's about Safe abortion care

From 187 respondents 100 (53.5%) said abortion should not be legalized under any circumstances. On the other hand, 36.4% said abortion should be legalized under any circumstances.

Of the respondents who said abortion should not be legalized as 47.6% said their religion doesn't allow, 24.6 % said homicide on the fetus. The remaining respondents said it will encourage having unwanted pregnancies, culturally it is not accepted and it encourages pre-/extra-marital sex which was 24.1%, 21.4% and 13.9% respectively (Figure 1).

One hundred (54.5%) respondents said that they were not comfortable working in a site where termination of pregnancy is performed.



Total Attitude score of HCWs and associated factors

Half (52.4%) of the respondent have positive attitude while 47.6% had negative attitude. Respondent's Year of Experience and Religion was statistically significant association with mean attitude score ($p < 0.05$). The attitude of respondents with Year of experience 1- 3 year were 2.9 times more likely to have positive attitude than respondents with below 1 year of experience (AOR=2.9; 95% CI = (1.1-8.3); $p=0.033$) and also those respondents with 5 -10 years of experience were 4.7 times more likely to have positive attitude than respondents below 1 year experience (AOR=4.7; 95% CI= (1.3 – 17.4); $P=0.020$). (Table 4)

Other associated factor is religion, Muslim respondents were 71% times less likely to have positive attitude than Orthodox respondents (AOR=0.29; 95% CI= (0.1 -0.8); P=0.022).

Conversely other variables had statistically insignificant association with health care worker's attitude. (Table 4)

Table 4 The Bivariate and Multivariate logistic regression Result on factors Associated with health care workers Attitude towards safe abortion, Addis Ababa, August 2021

Variable	Positive Attitude	Negative Attitude	Crude OR (95% CI)	P=Value	Adjusted OR (95% CI)
Profession					
Nurse(BSC)	16(16.3%)	12(13.5%)	1		1
Midwife(BSC)	21(21.4%)	52(58.4%)	0.55(0.23 - 1.32)	0.055	0.36(0.12 -1.02)
Medical Doctors	61(62.2%)	25(28.1%)	0.17(0.08 - 0.33)	0.215	1.945(0.8 -5.6)
Age (Years)					
<25 Years	16(16.3%)	27(30.3%)	1		1
25 – 29Years	47(48.0%)	43(48.3%)	1.8(0.9-3.9)	0.571	1.3(0.53- 3.2)
30 – 34Years	23(23.5%)	7(7.9%)	5.5(1.9 -15.8)	0.459	1.6(0.45- 5.8)
>35 Years	12(12.2%)	12(13.5%)	1.7(0.6 - 4.6)	0.780	0.8(0.26-2.8)
Years of experiences					
< 1Year	11(11.2%)	21(23.6%)	1		1
1 – 3 Year	41(41.8%)	29(32.6%)	2.7(1.1-6.5)**	0.033	2.9(1.1 - 8.3)**
3 – 5 Year	18(18.4%)	28(31.5%)	1.2(0.5 -3.1)	0.654	1.3(0.4 -3.7)
5 – 10 Year	19(19.4%)	7(7.9%)	5.2(1.7 -16.1)**	0.020	4.7(1.3 -17.4)**
>10 Year	9(9.2%)	4(4.5%)	4.3(1.1 -17.2)	0.144	3.2(0.7 -15.3)
Gender					
Female	52(53.1%)	57(64.0%)	1		1
Male	46(46.9%)	32(36.0%)	1.6(0,9 -2.8)	0.313	1.4(0.7 -2.9)
Marital status					
Single	64(65.3%)	64(71.9%)	1		1
Married	34(34.7%)	25(28.1%)	1.4(0.7 -2.5)		
Religion					
Orthodox	70(71.4%)	59(66.3%)	1		1
Muslim	9(9.2%)	17(19.1%)	0.45(0.18- 1.07)**	0.022	0.29(0.1 – 0.8)**
Protestant	9(9.2%)	10(11.2%)	0.76(0.29 – 1.9)	0.351	0.6(0.19- 1.8)
Catholic	10(10.2%)	3(3.4%)	2.8(0.74 -10.7)	0.362	1.97(0.46 - 8.6)

NB: **p-value<0.05

Health care Worker's Practice on Safe abortion care

Among participants seventy-one (38.0%) said they were trained on SAC of whom, 54.0% said they practiced/practicing SAC services (Figure 2). Concerning methods of pregnancy termination, 54.5% practiced safe abortion service using medication abortion and 51.9% MVA. The others said using D&C, and D&E which was 15.0% and 13.4% respectively (Table 4). Of the total 187 respondents 169 (86.6%) gave post abortion family planning, and frequently they gave injectable (51.9%), implants (77.5%), oral contraceptive pills (OCP) (46.5%), Intrauterine device (IUD) (49.2%) and 8.6% natural methods.



Total Practice score of HCWs and associated factors

Nearly half (49.2%) of the respondent have good practice while 50.8% had poor practice. Practice scores had statistically significant association with variables like Respondents profession and year of experience. The mean Practice score of Midwives and Medical doctors were 14 times and 45 times more likely to have good practice above the mean than Nurse (AOR=14; 95% CI=2.4-80.1; P=0.003) and (AOR=45; 95% CI=7.9 -255.1); P=0.000 respectively. (Table 5)

Other associated factor is age of respondents those age group 25-29 year and above 35 year were 3.5 times and 4 times more likely to have good practice than below 25 years age(AOR=3.5; 95% CI=1.3-9.5); P=0.014) and (AOR= 4.0; 95% CI=1.01-15.98);P=0.048) respectively. Practice scores had statistically insignificant association with other variables. (Table 5)

Table 5 The Bivariate and Multivariate logistic regression Result on factors Associated with health care workers Practice to wards safe abortion, Addis Ababa, August 2021

Variable	Good Practice	Poor Practice	Crude OR (95% CI)	P-Value	Adjusted OR (95% CI)
Profession					
Nurse(BSC)	2(2.2%)	26(27.4%)	1		1
Midwife(BSC)	27(29.3%)	46(48.4%)	7.6(1.7 -34.7)	0.003	14.0(2.4 -80.1)**
Medical Doctors	63(68.5%)	23(24.2%)	35.6(7.8-162.1)	0.000	45.1(7.9-255.1)**
Age (Years)					
<25 Years	9(9.8%)	34(35.8%)	1		1
25 – 29Years	49(53.3%)	41(43.2%)	4.5(1.94 -10.5)	0.014	3.5(1.3 -9.5)**
30 – 34Years	22(23.9%)	8(8.4%)	10.4(3.5 -30.9)	0.072	3.6(0.89 -14.9)
>35 Years	12(13.0%)	12(12.6%)	3.8(1.3 -11.2)	0.048	4.02(1.01 -15.98)**
Years of experiences					
< 1Year	14(15.2%)	18(18.9%)	1		1
1 – 3 Year	31(33.7%)	39(41.1%)	1.02(0.44 -2.4)	0.429	0.66(0.23 -1.85)
3 – 5 Year	18(19.6%)	28(29.5%)	0.83(0.33 -2.1)	0.213	0.498(0.16 -1.49)
5 – 10 Year	21(22.8%)	5(5.3%)	5.4(1.63 -17.9)	0.076	3.8(0.87- 17.1)
>10 Year	8(8.7%)	5(5.3%)	2.06(0.55 -7.7)	0.406	2.2(0.33 -14.9)
Gender					
Female	55(59.8%)	54(56.8%)	1		1
Male	37(40.2%)	41(43.2%)	0.89(0.5 -1.6)		
Marital status					
Single	58(63.0%)	70(73.7%)	1		1
Married	34(37.0%)	25(26.3%)	1.64(0.88 -3.1)	0.474	1.35(0.59 -3.07)
Religion					
Orthodox	62(67.4%)	67(70.5%)	1		1
Muslim	17(18.5%)	9(9.5%)	2.04(0.85 -4.9)	0.130	2.3(0.78-6.9)
Protestant	9(9.8%)	10(10.5%)	0.97(0.37 -2.55)	0.398	0.6(0.19-1.9)
Catholic	4(4.3%)	9(9.5%)	0.48(0.14 -1.64)	0.835	0.83(0.14-4.9)

NB: **p-value<0.05

The relation between HCW's Knowledge, Attitude and Practice of SAC

Pearson correlation analysis was performed used to evaluate the possible association between knowledge-attitudes (K-A), knowledge-practices (K-P), and attitudes-practices (A-P) scores within HCWs'. There were positive correlations between and Attitude and practice ($r=0.317$, $p=0.000$), and knowledge and practice ($r=0.367$, $p=0.000$). But there is no relation between knowledge and attitude ($r=0.138$, $p=0.059$)

DISCUSSION

The Current study is undertaken at SPHMMC on Health care workers knowledge, attitude and practice towards safe abortion and its associated factors.

This study showed the respondent had much better knowledge when compared with study which was done in Tigray (63.3%)(13) and Addis Ababa health center (71.9%)(11). It may be due to working place in capital town and study population where Mid-level providers respectively.

Knowledge of the law is essential so that providers not only know what is expected of them but can also inform and educate women and community at large(9). The provider, as mentioned in the penal code of FDRE, should get clear standard written consent information from all pregnant women who undergoing pregnancy termination after having an objective counseling(8). The information should be clear, objective, and non-coercive and provided in a language understandable to the client. From this study, 93.6% of the participants had or would have access to a written consent from the woman before practicing the safe abortion service which is higher when comparing a research done in Addis Ababa Health center (84.2%)(11) and similar with study done in Tigray (93%)(13).

Post –procedure care is essential as care during procedure to ensure maximum outcome in abortion care services. The post-abortion care (PAC) components are Community and service provider partnership, treatment of incomplete and complication of unsafe abortion, Counseling, contraceptive and family planning service and integration of reproductive and other health services(9). From this study participants (90.9%) knew the PAC, though (89.8%) of respondents knew Referral arrangements for social support and care are an integrated part of abortion care and integration of reproductive & other health services as components of PAC which is higher comparing from other studies (58.5%,33.1%,58%) in Tigray, Addis Ababa health center and Addis Ababa health facility respectively(11, 13, 14).

As professionals, health care workers must learn to separate their personal beliefs and values from their professional practices and treat all women equally and with empathy, regardless of their reproductive behaviors and decisions(2, 5, 7). The present study tried to obtain information on liberalization of abortion at any circumstances. Attitude favoring abortion to be legal was found to be 36.4% of which much lower than a study done on health providers in Addis Ababa health facility (41.8%)(14) and relatively better than study done at Addis Ababa Health center (27.7%)(11). The national guideline under the subtitle of “provider’s skills and performance” clearly underlines the importance of providing basic knowledge and skills to health providers on regular basis in order to maximize their effectiveness to provide the service and manage abortion and its complications(9).

From this study only 38% took training on safe abortion; of them 54% applied their training on practice. This study showed better results than study conducted previously in Addis Ababa health facilities (29.4%)in 2008(14), Addis Ababa health center (20.5 %) in 2015(11) and Tigray(20%) in 2011 have had the training(13). This suggests the need to introduce procedures of pregnancy termination during health service providers’ pre-service training. Among procedures majority practiced mifepristone with misoprostol and MVA. This finding congruent with guideline recommends health care providers should practice medication abortion for first trimester termination of pregnancy. Repeated unwanted pregnancies and abortions are prevented by post abortion family planning (PAFP) counseling and service provision which has all elements of family planning, and can be offered at the abortion-care facility (9). From our study majority of providers (86.6%) offered post abortion family planning which is better than study done at Addis Ababa HC (49.6%)(11), Even all health professions expected to give post abortion family planning according to the guideline.

More than half (73.8%) of respondents had adequate knowledge related to abortion which is better than study done Addis Ababa HC (53.1%)(11) and which is comparable with study done at Asela Teaching hospital (81.1%). The finding from the study showed medical doctors had 30 times better knowledge than other health care providers may be due to their daily activity is with women and pregnant mothers who help them to have better understanding related abortion. So, nurses and Midwives need to have much pre-/on service training and the curriculum also should focus on thus professions.

From this study more than half (52.4%) of respondents had positive attitude towards safe abortion which is comparable with study done at Addis Ababa HC(54.1%)(11) and Study done Adama health facility(48%)(15) but lower than study done at Asela Teaching hospital(68.1%)(12) this could be due to factors like Religious beliefs and clinical experience of providers. The finding from the regression shows Being Muslim is 71% less likely to have positive attitude than other, which is similar with study done in Egypt(16) and year experience on abortion which showed HCW who had clinical experience >3 year were 2.9 times favorable attitude towards safe abortion.

This study revealed small number of HCWs' had Good practice towards safe abortion care (49.2%) in spite of having good knowledge and positive attitude. The result lower to the study conducted at Asela, Teaching hospital which showed (68.1%)(12) of HCWs had Good practice of SAC. The possible explanation for lower level of practice of SAC noticed in our study might be due to study conducted from different facility and Score used to assess the Practice questions. The finding from regression shows Medical doctors and midwife with age above 25 year were more likely to have Good Practice than others.

From this study, knowledge and Attitude related to abortion consistently influence HCW Practice towards safe abortion but there is no correlation between knowledge and attitude which contradicts study done at Addis Ababa HC and sub-Saharan Africa & south east Asia which states , providers who had good knowledge about abortion were likely to have positive attitude towards SAC (11,17). The possible explanation might be the different study population and Research design.

CONCLUSIONS

- Majority of respondents had Good knowledge related to abortion.
- Half of the health care worker had Positive Attitude and Good Practice to wards SAC
- Being Medical doctor were associated with providers' knowledge related to abortion.
- Having clinical experience above 3 year on abortion and being Muslim were significantly associated with providers' attitude toward safe abortion.
- Age above 25 year and being Medical doctor also influenced the practice of SAC.
- Knowledge and Attitude related to abortion influenced the practice of SAC
- Also, participants were from one hospital only; private institutions and government hospitals were not included and caution is needed in using the results of the study.

RECOMMENDATIONS

- Provision of training for HCWs is also highly important for improving SAC practice.
- Creating community awareness about Safe abortion care through morning education, public media or other should be strongly worked.
- Involving nurses midwives and other staffs in provision of SAC might solve care.
- 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.
- Further research including qualitative methods related to this topic at all health institutions among all professionals is recommended.

ABBREVIATIONS

SPHMMC: Saint Paul Hospital Millennium Medical College

KAP: Knowledge, Attitude and Practice

LNMP: Last Menstrual Period

D &C: Dilation and curettage

E &C: Evacuation and curettage

FDRE-MOH: Federal Democratic Republic of Ethiopia -Ministry of Health

IUD: Intrauterine device

MVA: Manual Vacuum Aspiration

NGOs: Non-Governmental Organizations

OBGYN: Obstetrics and Gynecology

OCP: Oral contraceptive pills

PAC: Post abortion care

SAC: Safe abortion care

HCW: Health care worker

GP: General practitioner

SPSS: Statistical Package for Social Sciences

WHO: World Health Organization

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DECLARATION

I, undersigned agrees to accept responsibility for the scientific ethical and technical conduct of the research thesis and declare that this thesis is my original work in partial fulfillment of the requirement for the postgraduate study in OBGYN. I also declare that it has never been presented in this or any other university and that all resources and materials used in the thesis have been duly acknowledged.

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Signature_____

This thesis has been submitted for examination with my approval as an advisor

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Date: _____

