



Determinants of Unsafe Abortion among Women of Reproductive Age (15-45yrs) in the Central Region, Ghana: A Facility Based Crosssectional Study at Dunkwa Municipal Hospital

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/123295>

Received: 16/07/2024

Accepted: 18/09/2024

Published: 21/09/2024

Original Research Article

ABSTRACT

Introduction: The purpose of this study was to assess the determinants of unsafe abortion among women within their fertility age in the Central Region using Dunkwa Municipal Hospital as a case study.

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Cite as: Gyaase, Philip, Juliet Attah, Peggy Mensah, Patience Adzordor, Alijata Braimah, Emmanuel Ntiamoah, Emmanuel Boateng Acheampong, Emmanuel Kwesi Eshun, and David Ben Sampson. 2024. "Determinants of Unsafe Abortion Among Women of Reproductive Age (15-45yrs) in the Central Region, Ghana: A Facility Based Crosssectional Study at Dunkwa Municipal Hospital". *Asian Journal of Pregnancy and Childbirth* 7 (1):137-53. <https://www.journalajpcb.com/index.php/AJPCB/article/view/140>.

Methods: A facility based cross sectional study design was used for the study at Dunkwa Municipal Hospital. The population for the study was women in their reproductive age (15-49) accessing health care at Dunkwa Municipal Hospital from January to August, 2024. The study used 381 sample size, with simple random as a sampling technique. A structured questionnaire containing close and open ended questions was used to gather information from the study respondents. Data entry and analyses were done using SPSS version 22.0 software. Both descriptive and inferential analyses were performed to assess the significance level of 0.05.

Results: The following health facility factors proved statistically significant: Health workers perception, inexperience of health workers, high cost of safe abortion at the health facilities, health workers poor attitude, poor access to health facilities and lack of family planning on unsafe abortion (p-value=<0.001) respectively. The significant sociocultural factors were culture, early marriage, religion, money for family planning, parents, no parental sex education were all significant (p-value=<0.001) respectively. On sociodemographic characteristics and unsafe abortion the following variables were statistically significant (p-value=<0.001), age of the respondents had strong association with unsafe abortion. Educational status was also statistically associated with unsafe abortion (p-value =<0.001). Religion and income level were also statistically associated with unsafe abortion among the respondents (p-value =<0.001).

Conclusion: It is concluded that if health workers improve upon their attitude, competence and reduce cost of health care, unsafe abortion among women would be reduced. Dealing with these sociocultural characteristics appropriately in the various communities can go a long way to reduce unsafe abortion. Any woman can experience unsafe abortion irrespective of her demographic features. Female counselling sessions need to be made available by the Ministry of Health and Ghana Health Service to sensitize them on the dangers of unsafe abortion.

Keywords: Foetus; unsafe abortion; reproductive age; central region.

1. INTRODUCTION

Every woman was acknowledged as having the right to freely and responsibly choose the number, timing, and spacing of her children during the inaugural International Conference on Population and Development (ICPD) in 1994 [1]. They also enjoy the best standards of sexual and reproductive health, as well as the right to information and the means to obtain this [2]. A crucial element in ensuring the realization of these rights is the accessibility and availability of safe and legal abortion, as 25% of pregnancies result in abortions [3].

Any method used to end a pregnancy, whether or not it is viable, that causes the foetus to die or be expelled is referred to as an abortion [4]. It could be induced or spontaneous. Any termination that occurs within the first 28 weeks following the last menstrual cycle is classified as an abortion in Ghana since the age of viability is established at 28 weeks [5]. The means by which abortion is performed, whether safe or unsafe has implications on the woman's health [6].

A key contributing factor to maternal morbidity and death is unsafe abortion [7]. "Any procedure for terminating a pregnancy performed by persons lacking the necessary skills or in an

environment not in compliance with minimal medical standards, or both," according to the World Health Organization, is classified as an unsafe abortion [8-11]. Unsafe termination procedures become more common when access to safe abortion is restricted [12]. The provision of high-quality abortion care services is hampered by stigmatization by the community and service providers [13].

Between 2018 and 2022, 13% of maternal fatalities worldwide were related to unsafe abortions [14]. Numerous immediate and long-term problems result from unsafe abortions. 97% of the nearly 21.9 million unsafe abortions carried out annually take place in low-income nations [15]. Estimates of the number of unsafe abortions performed in Africa range from 18 to 39 per 1000 women, which is the highest percentage [16-18].

Poor awareness of safe abortion services, the belief that abortion is a taboo procedure in Ghanaian culture and religion, the social stigma attached to an unplanned pregnancy, and the desire to avoid parental disappointment and neglect after an unplanned pregnancy are some of the factors that contribute to the high rate of unsafe abortions [19-21]. Unsafe abortions can result in organ damage, haemorrhage, sepsis, and retained pregnancy products [22]. Additional

long-term effects include secondary infertility, tubal obstruction, and pelvic inflammatory illness [23]. To address the clinical signs of these sequelae, terminate the cycle of repeated unplanned pregnancies, and reduce the need for abortions, high-quality post-abortion care services are necessary [24].

According to recent estimates, 31% of the 56 million induced abortions performed annually worldwide are less safe than 45% of hazardous procedures [25]. They were either induced by an inexperienced individual or without the use of a WHO-recommended technique suitable for the gestational age [26]. The least safe category comprises 14% of cases, which include both ineffective techniques and unskilled personnel. In Africa, 44% of abortions are thought to be the least safe [27]. Even while many nations now offer access to medical abortion and manual vacuum aspiration (MVA), safe techniques of ending pregnancies, a sizable number of unsafe abortions are performed annually throughout the world [28].

Additionally, there is little evidence that women in Africa are getting better access to high-quality abortion treatment because national health systems hardly ever have the capacity to offer this kind of care [29]. Maternal mortality and abortion rates are significantly correlated in Ghana [8]. Maternal mortality can be directly caused by unsafe abortion practices, and complications from abortion have been identified as one of the main causes of death for Ghanaian women in the Central Region [30]. Among women in the reproductive age range of 15 to 49 years, 20% had undergone an abortion. Of them, around 57% had employed non-medical techniques [31,32].

Unsafe abortion is one of the main causes of maternal mortality, accounting for around one in ten (11%) of all maternal deaths. The objective of the Sustainable Development Goals (SDGs) is to bring the ratio of maternal death to about 70 per 100,000 live births. Effective abortion care service implementation will lower the contribution of unsafe abortions and the ensuing consequences to maternal mortality, which is necessary for Ghana to meet this aim [33]. In addition to raising maternal mortality and morbidity, the problems linked to unsafe abortions further divert the nation's limited health resources, which has grave repercussions for public health [34].

Ghana is thought to have a more liberal abortion law when compared to other African nations. The

number of women who present to medical facilities each year with problems from unsafe abortions rises as a result of poor post-abortion care provided by healthcare professionals who lack resources [35]. In 2021, mothers between the ages of 25 and 29 were the most affected (51%) by spontaneous abortions; in 2022, however, mothers between the ages of 20 and 24 recorded the highest number of abortions (61%) in the Central Region [36].

In Africa, young girls under the age of 25 account for about 60% of unsafe abortions. Women in their reproductive age frequently have complications from unsafe abortions worldwide [20]. Younger women also have a tendency to have more serious complications from induced abortions than do older women [13]. Regrettably, they are also treated with inferior abortion care practices [15].

Young, single women have difficulties getting an abortion. These difficulties are ascribed to things like immorality and disobedience to sexual abstinence regulations. The biggest obstacles single and unmarried women had to face while obtaining a professional abortion were shame and dishonour. These two factors increased the risk of serious complications and mortality by causing large delays in seeking professional abortion care [9].

Poor women and girls bear the brunt of disparities in access to safe abortion and post-abortion care services. Wealthy women are typically able to pay for safe abortion care from licensed medical professionals and facilities, and they are also more likely to receive post-abortion care [7,37]. Traditional healers, friends, family, or the woman herself are examples of providers. In certain situations, whether a prior attempt at pregnancy termination ended in a major problem dictates the type of provider [38,39].

1.1 Objectives of the study

- i. To assess health facility determinants of unsafe abortion among women in their reproductive age at Dunkwa Municipal Hospital
- ii. To assess the sociocultural determinants of unsafe abortion among women in their reproductive age at Dunkwa Municipal Hospital
- iii. To determine the association between the sociocultural factors and unsafe abortion

2. METHODS

2.1 Study Site

The study was conducted at the Dunkwa Municipal Hospital which is located at the south western part of Dunkwa Township. The hospital serves a total population of 144824 people which consist of 60 communities. It has 13 departments namely OPD, operating theatre, RCH counselling and testing eye department, male ward female ward, ENT laboratory, radiology, and pharmacy maternity and morgue. The Dunkwa Municipal Hospital has staff strength of 256 both medical and para-medicals.

2.2 Study Population

Women within their reproductive ages (15-45 years) and accessing health care services at the Dunkwa Municipal Hospital served as the population for the study. The respondents had to be at the hospital during the data collection and were willing to take part in the study.

2.3 Study Design

The study employed facility based cross-sectional design to assess the determinants of unsafe abortion among women within their fertility age using Dunkwa Municipal Hospital as case study. A case study is an in-depth study of one person, group, or event. In a case study, nearly every aspect of the subject's life and history is analyzed to seek patterns and causes of behaviour [40]. Case studies can be used in various fields, including psychology, medicine, education, anthropology, political science, and social work. The purpose of this study design was to learn as much as possible about trainee nurses knowledge and practice of emergency contraceptive so that the information can be generalized to many others. Unfortunately, case studies tend to be highly subjective, and it is sometimes difficult to generalize results to a larger population. While case studies focus on a single individual or group, they follow a format similar to other types of psychology writing [9].

2.4 Sampling Size Determination

The prevalence of women within their fertility age (WIFA) hospital attendance according to the Municipal Health Directorate Report, 2023 was 40.26 percent at the hospital. Using the proportion 40.26%, the minimum sample size required for this study was derived using

Cochran's (1977) formula: $n = (Z \alpha/2)^2 P (1-P) / d^2$.

$$n = (1.96)^2 (0.5) (0.5) / (0.05)^2$$

Z = z statistic for a 95% confidence level (1.96)

P = a proportion of 0.628

1 = 1-proportion of not affected

d = a precision of 5% was used;

$$n = (1.96)^2 (0.628) (0.426) / (0.05)^2 = 346$$

Allowing for 10% non-response rate, the minimum respondents for the study was 381.

2.5 Sampling Technique

Simple random sampling method was used to select the women with their reproductive ages at the hospital's Outpatient Department (OPD). The researchers used ten (10) working days to select the respondents who met the study criteria.

2.6 Data Collection Techniques

Quantitative data collection method was employed for this study. In this case a structured questionnaire containing both close and open-ended questions was used to gather information from the study respondents. The principles of the study were explained to respondents using the participant information sheet. The information sheet was prepared in English since all the participants were literates. Consent was sought from individuals who agreed to be part of the study with their privacy and confidentiality fully assured.

The entire questionnaire was built in four (4) sections. The first section was made up of questions relating to the socio-demographic characteristics of the respondents. The second section comprised questions relating to the health facility's determinants of unsafe abortion. The third part contained questions relating to the sociocultural determinants of unsafe abortion. The fourth section dealt with the demographic features that affected unsafe abortion among the women. Data collection was facility-based and the data were collected by the researchers themselves.

2.7 Pilot Study

At the Diaso Health Center, pre-testing of the data collection instrument took place. The pilot study area was situated outside the study site,

but had similar characteristics in terms of personnel and facilities. The Diaso Health Center was chosen for the pilot study due its proximity and has similar geographical characteristics like Dunkwa Municipal Hospital. The pilot study helped classified certain difficulties that were linked to the understanding of the respondents. The researcher piloted the questionnaire on 20 women within their reproductive ages to check for reliability of the instrument. The Cronbach Alpha co-efficient was calculated for the questionnaire and yielded 0.803.

2.8 Data Analysis

Data and obtained through the questionnaire were keyed into Microsoft Excel application under predefined classifications and subsequently exported to Statistical Package for Social Sciences (SPSS) version 25.0 application for statistical analyses. Thus, SPSS was used to run both descriptive and inferential statistical analysis to show the characteristic patterns between the data sets and also produced results which aided in the interpretations and significance of the data relative to the objectives of the research.

The results from the SPSS analysis were presented in tables and graphs. Participants' sociodemographic characteristics were described using descriptive analysis with results presented in frequencies, percentages, mean and standard deviation in tables.

Objective one (health facility determinants of unsafe abortion) was analysed with logistic regression and Chi-Square test.

Objective two (the sociocultural determinants of unsafe abortion) was also analysed with logistic regression and Chi-Square test.

Objective three (the demographic features that affect unsafe abortion), was analysed using factor analysis and descriptive statistics.

3. RESULTS

3.1 Socio-demographic Characteristics of Respondents

Table 1 presents the socio-demographic characteristics of the respondents. More than half of the respondents 254(66.7%) were 30

years and above whilst 16(4.2%) were within the age range of 26-30 years with mean age of 30.5 and standard deviation of 5.5. Also, 257(67.5%) of the respondents were JHS leavers as against 13(3.4%) who had tertiary as their educational status. Furthermore, majority of the respondents 328(86.1%) were Christians whilst 53(13.9%) were Moslems. More than half of the respondents 292(76.6%) had 1-3 children whilst 42(11.0%) did not have children. Again, 232(60.9%) engaged in business whilst 20(5.2%) were farmers. On household income, majority of the respondents 256(67.2%) were within GH¢500 and GH¢1000 with mean of GH¢820. Additionally, more than half of the respondents 195(51.2%) have had unsafe abortion before as against 186(48.8%).

3.2 Health Facility's Determinants of Unsafe Abortion

Table 2 depicts the health facility determinants of unsafe abortion. Majority of the respondents 349(91.6%) disagreed to the fact that health workers perception caused unsafe abortion. Also, most of the respondents 322(84.5%) disagreed that inexperienced among health workers caused unsafe abortion. High cost of safe abortion at the health facilities caused unsafe abortion according to the majority of the respondents 231(60.6%). Poor attitude of health workers towards patients influenced unsafe abortion as was agreed by most of the respondents 321(84.3%). More than half of the respondents 276(72.4%) agreed that long waiting time at the health facilities caused unsafe abortion. On poor access to health care facilities, most of the respondents 336(88.2%) agreed that it caused unsafe abortion. Lastly, most of the respondents 312(81.9%) agreed that lack of family planning caused unsafe abortion.

Table 3 shows the bivariate analysis of the association between the health facility determinants and unsafe abortion. Health workers perception was associated with unsafe abortion which statistically significant (p -value= <0.001). The following variables proved statistically significant: inexperience of health workers, high cost of safe abortion at the health facilities, health workers poor attitude, poor access to health facilities and lack of family planning on unsafe abortion (p -value= <0.001) respectively. Long waiting time was not statistically significant (p -value=0.011).

Table 1. Demographic characteristics of Respondents

Variables	Frequency	Percentage (%)
Age		
16 – 20 years	28	7.3
21 – 25 years	83	21.8
26-30 years	16	4.2
>30 years	254	66.7
Total	381	100.0
Mean = 30.5 SD = 5.5		
Educational level		
Primary	66	17.3
JHS	257	67.5
SHS	45	11.8
Tertiary	13	3.4
Total	381	100.0
Religion		
Christian	328	86.1
Moslem	53	13.9
Total	381	100.0
Number of children		
None	42	11.0
1-3	292	76.6
>3	47	12.3
Total	381	100.0
Occupation		
Farmer	20	5.2
Artisan	108	28.3
Salary worker	21	5.5
Business	232	60.9
Total	381	100
Household income		
<GH¢500	72	18.9
GH¢500- GH¢1000	256	67.2
>¢1000	53	13.9
Total	381	100.0
Mean = 820.4 SD = 365.4		
Whether respondents have had unsafe abortion before		
Yes	195	51.2
No	186	48.8
Total	381	100.0

Table 2. Descriptive analysis of health facility determinants of unsafe abortion

Statement	Frequency	Percent
Health workers perception causes unsafe abortion		
Agree	32	8.4
Disagree	349	91.6
Total	381	100.0
Inexperienced health workers cause unsafe abortion		
Agree	59	15.5
Disagree	322	84.5
Total	381	100.0
High cost of safe abortion at facilities leads to unsafe abortion		
Agree	231	60.6
Disagree	150	39.4
Total	381	100.0
Poor attitude of health workers influence unsafe abortion		
Agree	321	84.3
Disagree	60	15.7
Total	381	100.0
Long waiting time at the facilities causes unsafe abortion		
Agree	276	72.4
Disagree	105	27.6
Total	381	100.0
Poor access to health facilities causes unsafe abortion		
Agree	336	88.2
Disagree	45	11.8
Total	381	100.0
Lack of family planning		
Agree	312	81.9
Disagree	69	18.1
Total	381	100.0

Table 3. Bivariate analysis of the association between the health facility factors and unsafe abortion

Causes of unsafe abortion at the health facility	Had unsafe abortion before		Total n(%)	χ (<i>p</i> -value)
	Yes n(%)	No n(%)		
Health workers perception				
Agree	32(8.4)	0(0.0)	32(8.4)	33.322(<0.001)
Disagree	163(452.8)	186(48.8)	349(91.6)	
Total	195(52.1)	186(48.8)	381(100.0)	
Inexperience of health workers				
Agree	0(0.0)	59(15.5)	59(15.5)	73.188(<0.001)
Disagree	195(51.2)	127(33.3)	322(84.5)	
Total	195(51.2)	186(48.8)	381(100.0)	
High cost of safe abortion				
Agree	195(51.2)	36(9.4)	231(60.6)	259.374(<0.001)
Disagree	0(0.0)	150(39.4)	150(39.4)	
Total	195(51.2)	186(48.8)	381(100.0)	
Health workers poor attitude				
Agree	135(35.4)	186(48.8)	321(84.3)	67.928(<0.001)
Disagree	60(15.7)	0(0.0)	60(15.7)	
Total	195(51.2)	186(48.8)	381(100.0)	
Long waiting times				
Agree	0(0.0)	20(5.2)	20(5.2)	6.345(0.011)
Disagree	195(51.2)	108(28.3)	108(28.3)	
Total	195(51.2)	186(48.8)	381(100.0)	
Poor access to health facilities				
Agree	195(51.2)	141(37.0)	336(88.2)	53.496(<0.001)
Disagree	0(0.0)	45(11.8)	45(11.8)	
Total	195(51.2)	186(48.8)	381(100.0)	
Lack of family planning				
Agree	195(51.2)	117(30.7)	312(81.9)	88.337(<0.001)
Disagree	0(0.0)	69(18.1)	69(18.1)	
Total	195(51.2)	186(48.8)	381(100.0)	

3.3 Socio-cultural Determinants

Sociocultural determinants of unsafe abortion are seen in Table 4. Most of the respondents 221(58.0%) strongly agreed that their culture forbade them from unsafe abortion. Also, more than half of the respondents 230(60.4%) strongly agreed that early marriage caused unsafe abortion. Majority of the respondents 221(58.0%) strongly agreed that lack of money caused unsafe abortion. Overwhelming majority of the

respondents 288(75.6%) strongly agreed that their religion prevented them from unsafe abortion. More than half 276(72.4%) disagreed that lack of money for family planning made them go for unsafe abortion. Also, 270(70.9%) disagreed that their parents were against family planning. Most of the respondents 277(72.7%) strongly agreed that their parents did not educate them on sexual activities. Almost half of the respondents 251(65.9%) strongly agreed to the fact that they preferred home abortion to hospital.

Table 4. Descriptive analysis of socio-cultural determinants of unsafe abortion

Statement	Frequency (381)	Percentage
My culture forbids unsafe abortion		
Strongly agree	221	58.0
Agree	30	7.9
Disagree	119	31.2
Strongly disagree	11	2.9
Early marriage cause unsafe abortion		
Strongly agree	230	60.4
Agree	42	11.0
Disagree	88	23.1
Strongly disagree	21	5.5
Lack of money cause unsafe abortion		
Strongly agree	221	58.0
Agree	22	5.8
Disagree	84	22.0
Strongly disagree	54	14.2
My religion prevents me from abortion		
Strongly agree	288	75.6
Agree	21	5.5
Disagree	36	9.4
Strongly disagree	36	9.4
I don't have money for family planning		
Strongly agree	85	22.3
Agree	9	2.4
Disagree	276	72.4
Strongly disagree	11	2.9
My parents are against family planning		
Strongly agree	65	17.1
Agree	30	7.9
Disagree	270	70.9
Strongly disagree	16	4.2
My parents do not educate me on sex		
Strongly agree	277	72.7
Agree	17	4.5
Disagree	74	19.4
Strongly disagree	13	3.4
I prefer home abortion to hospital		
Strongly agree	251	65.9
Agree	18	4.7
Disagree	76	19.9
Strongly disagree	36	9.4

Table 5. Bivariate analysis of the association between the sociocultural factors and unsafe abortion

Sociocultural causes of unsafe abortion	Had unsafe abortion before		Total n(%)	χ (<i>p-value</i>)
	Yes n(%)	No n(%)		
My culture forbids abortion				
Strongly agree	195(51.2)	26(6.8)	221(58.0)	289.184(<0.001)
Agree	0(0.0)	30(7.9)	30(7.9)	
Disagree	0(0.0)	119(31.2)	119(31.2)	
Strongly disagree	0(0.0)	11(2.9)	11(2.9)	
Total	195(52.1)	186(48.8)	381(100.0)	
Early marriage				
Strongly agree	195(52.1)	35(9.2)	230(60.4)	262.238(<0.001)
Agree	0(0.0)	42(11.0)	42(11.0)	
Disagree	0(0.0)	88(23.1)	88(23.1)	
Strongly disagree	0(0.0)	21(5.5)	21(5.5)	
Total	195(51.2)	186(48.8)	381(100.0)	
My religion prevents abortion				
Strongly agree	123(32.3)	165(43.3)	288(75.6)	98.968(<0.001)
Agree	0(0.0)	21(5.5)	21(5.5)	
Disagree	36(9.4)	0(0.0)	36(9.4)	
Strongly disagree	36(9.4)	0(0.0)	36(9.4)	
Total	195(51.2)	186(48.8)	381(100.0)	
I don't have money for family planning				
Strongly agree	72(18.9)	13(3.4)	85(22.3)	64.037(<0.001)
Agree	0(0.0)	9(2.4)	9(2.4)	
Disagree	123(32.3)	153(40.2)	276(72.4)	
Strongly disagree	0(0.0)	11(2.9)	11(2.9)	
Total	195(51.2)	186(48.8)	381(100.0)	
My parents are against family planning				
Strongly agree	0(0.0)	65(17.1)	65(17.1)	164.212(<0.001)
Agree	0(0.0)	30(7.9)	30(7.9)	
Disagree	195(51.2)	75(19.7)	270(70.9)	
Strongly disagree	0(0.0)	16(4.2)	16(4.2)	
Total	195(51.2)	186(48.8)	381(100.0)	
No parental sex education				
Strongly agree	195(51.2)	82(21.5)	277(72.7)	149.969(<0.001)
Agree	0(0.0)	17(4.5)	17(4.5)	
Disagree	0(0.0)	74(19.4)	74(19.4)	
Strongly disagree	0(0.0)	13(3.4)	13(3.4)	
Total	195(51.2)	186(48.8)	381(100.0)	
I prefer home abortion to hospital				
Strongly agree	195(51.2)	56(14.7)	251(65.9)	206.879(<0.001)
Agree	0(0.0)	18(4.7)	18(4.7)	
Disagree	0(0.0)	76(19.9)	76(19.9)	
Strongly disagree	0(0.0)	36(9.4)	36(9.4)	
Total	195(51.2)	186(48.8)	381(100.0)	

The association between the socio-cultural determinants and unsafe abortion is seen in Table 3. The following variables proved statistically significant: my culture forbids abortion, early marriage, my religion prevents abortion, I don't have money for family planning,

my parents are against family planning, no parental sex education and I prefer home abortion to hospital (p-value= <0.001) respectively.

3.4 The Association between the Socio-demographic Features of Respondents and Unsafe Abortion

With statistical significance (p-value= <0.001), age of the respondents had strong association with unsafe abortion. Educational status was also statistically associated with unsafe abortion (p-value = <0.001). Religion and income level were also statistically associated with unsafe abortion among the respondents (p-value = <0.001) as seen in Table 6.

4. DISCUSSION

4.1 The Health Facility Determinants of Unsafe Abortion

Health workers perception about unsafe abortion was associated with unsafe abortion as well as the following variables: inexperience of health workers, high cost of safe abortion at the health facilities, health workers poor attitude, poor access to health facilities and lack of family planning on unsafe abortion. Long waiting time was not statistically significant. This implies that individual with access to health facilities; family planning and health education are more likely to engage in safe abortion.

Table 6. The association between the sociodemographic features of respondents and unsafe abortion

Variables	Had unsafe abortion before		Total n(%)	χ (p-value)
	Yes n(%)	No n(%)		
Age				
16-20	0(0.0)	28(7.3)	28(7.3)	199.718(<0.001)
21-25	0(0.0)	83(21.8)	83(21.8)	
26-30	0(0.0)	16(4.2)	16(4.2)	
>30	195(52.1)	59(15.5)	254(66.7)	
Total	195(52.1)	186(48.8)	381(100.0)	
Educational status				
Primary	0(0.0)	66(17.3)	66(17.3)	192.724(<0.001)
JHS	195(51.2)	62(16.3)	257(67.5)	
SHS	0(0.0)	45(11.8)	45(11.8)	
Tertiary	0(0.0)	13(3.4)	13(3.4)	
Total	195(51.2)	186(48.8)	381(100.0)	
Religion				
Christian	195(51.2)	133(34.9)	328(86.1)	64.543(<0.001)
Moslem	0(0.0)	53(13.9)	53(13.9)	
Total	195(51.2)	186(48.8)	381(100.0)	
Number of children				
None	0(0.0)	42(11.0)	42(11.0)	121.746(<0.001)
1-3	195(51.2)	97(25.5)	292(76.6)	
>3	0(0.0)	47(12.3)	47(12.3)	
Total	195(51.2)	186(48.8)	381(100.0)	
Occupation				
Farmer	0(0.0)	20(5.2)	20(5.2)	6.345(0.011)
Artisan	0(0.0)	108(28.3)	108(28.3)	
Salary worker	0(0.0)	21(5.5)	21(5.5)	
Businesswoman	195(51.2)	37(9.7)	232(60.9)	
Total	195(51.2)	186(48.8)	381(100.0)	
Income level				
<GH¢500	0(0.0)	72(18.9)	72(18.9)	195.037(<0.001)
GH¢500-1000	195(51.2)	61(16.0)	256(67.2)	
> GH¢1000	0(0.0)	53(13.9)	53(13.9)	
Total	195(51.2)	186(48.8)	381(100.0)	

These findings support some studies where counselling and provision of family planning are important elements of post abortion care at the health facilities. This is because, where there is a high unmet need for contraception, women resort to abortion as a means of birth control [2]. This is also consistent with findings from India where almost 75% of women post-abortion were not offered contraceptive services [6].

Similar results from Zimbabwe were attained with 85% of women not given any form of counselling or contraception [7]. The low prevalence of family planning access might be the cause of approximately 51% of the unsafe abortions in this study. The prevalence of contraceptive counselling was higher among women who had a safe abortion compared to those who used unsafe means [9].

Unskilled providers lack adequate knowledge and experience about abortion making them incapable of providing the service [10]. When the abortion is not done in a well-equipped location, complications, family planning and contraceptive services are usually unavailable [9]. Contrary to the study finding, more than 90% of women who accessed low cost health care and family planning were given counselling with almost all of them adopting a method before discharge [11]. The higher percentage from this above study was because the contraceptive counselling was given as part of follow up care and not immediately after the abortion when the women were dealing with complications such as pain.

Compared to women in the age group 40-49, those aged 20-39 years had a two fold increase in the odds of receipt of contraceptive counselling [13]. This may be because women in this age group are more likely to induce abortions. When they present to health facilities to seek abortion care, providers would want to give contraceptive counselling to reduce their risk of unwanted and unplanned repeat pregnancies. Also, younger women are more willing to accept post abortion contraception because they are often in school and unmarried and would want to delay childbearing [14].

The chance of receiving unsafe abortion is higher among rural residents compared to those in the urban areas. Contributing factors include, increase in the use of mid-level providers such as nurses and midwives instead of doctors whose availability is limited in rural areas as a means of improving safe abortion. Also, as part

of measures to increase contraceptive uptake in rural communities, more emphasis has been placed on training health personnel providing services in these areas making them more competent to provide quality post-abortion care [17].

Unsafe abortion is an important cause of maternal morbidity and mortality [10]. The WHO defines unsafe abortion as “a procedure for terminating a pregnancy performed by persons lacking the necessary skills or in an environment not in conformity with minimal medical standards or both” [11]. Limited access to safe abortion increases the recourse to unsafe termination procedures [12]. Abortion when performed by a trained health worker in a safe and legal setting is one of the safest medical procedures with mortality rates reported to be less than 1 per 100,000 [17].

4.2 The Sociocultural Determinants of Unsafe Abortion

Most of the respondents strongly agreed that their culture forbade them from unsafe abortion. Also, more than half of the respondents strongly agreed that early marriage caused unsafe abortion. Majority of the respondents strongly agreed that lack of money caused unsafe abortion. More than half disagreed that lack of money for family planning made them go for unsafe abortion. Most of the variables assessed including culture, early marriage, religion, money for family planning, parents, sex education etc were statistically significant. This suggests that socio-cultural factors are important predictors of unsafe abortion in the various communities. These findings are in line with a study conducted where community members played vital role in reducing unsafe abortion through the improvement of women's sexual and reproductive health [18].

Community health, education and mobilization are key strategies to combat unsafe abortion, increase access to and improve quality of post-abortion care. The partnership requires a team of health workers, community leaders, advocacy groups and traditional leaders [22]. The findings again revealed that early marriage caused unsafe abortion. Married women relative to those co-habiting or single had a lower prevalence of unsafe abortion [18]. Single or unmarried women are at higher risk of having an unsafe abortion because of the stigma associated with having a child out of wedlock [15]. Studies in Ghana show

that the stigma associated with abortion is a significant contributor to unsafe abortion [12]. The findings again support another study in Ghana [18] the showed unsafe abortion to be more prevalent among single women compared to those who were married.

Majority of the respondents agreed that lack of money caused unsafe abortion. Skilful abortion in most of the health facilities tend to be very expensive hence a lot of women engage in unsafe abortion at home [11]. This finding is contrary to a study where safe abortion was higher among women who had insurance because financial accessibility is a predictor of safe abortion care [31]. Cost of abortion is one of the factors that determine where a woman seeks an abortion. Safe and legal abortion services in Ghana are costly [12]. Absence of financial resources pushes women to patronize cheaper alternatives which are most often unsafe. From this study, high cost of safe abortion was a significant predictor of unsafe abortion.

Factors contributing to the high incidence of unsafe abortions include poor knowledge of safe abortion services, perception of abortion as religious and cultural taboos in Ghana, social stigma associated with an unplanned pregnancy and avoidance of parental disappointment and neglect following an unplanned pregnancy [22].

4.3 Sociodemographic Characteristics of Women that Affect Unsafe Abortion

With statistical significance, age of the respondents (>30 years) had strong association with unsafe abortion. This could be due to the fact that women at this age might have some number of children and may not want to have more children. This finding contradicts a study, where women in the age groups 15-19 and 20-29 years had the highest prevalence of unsafe abortion [14].

In Ghana, there is a significant association between abortion and maternal mortality [7]. Unsafe abortion is a proximate cause of maternal mortality and complications from abortion has been seen to be part of the leading causes of death among Ghanaian women in the Central Region [32]. Twenty percent of all women in the reproductive age group (15-49 years) have had an abortion. Out of this, about fifty seven percent had used non-medical methods [33].

According to a study, more than half of unsafe abortions in Africa are among women below the age of 25 years [11]. Similar findings were documented in a study where over 70% of women who had an unsafe abortion were aged between 20-24 years [29]. These results were also inconsistent with data on abortion in low and middle income countries [15]. From their data, women below 20 years constituted more than half of those who had an unsafe abortion.

A study on abortion among adolescents documented that adolescents were less likely compared to women in the other age groups to have an unsafe abortion [17]. The difference could be due to the reason that the abortion law in Ethiopia acknowledges an adolescent girls' inability in most cases to carry a pregnancy to term. An age criterion is therefore included making safe and legal abortion available to girls below the age of 18 years. This implies that they in comparison to their peers in Ghana have better access to safe and legal abortion services [28].

The findings again revealed that religion affected ones unsafe abortion practice. This finding corroborate with a study in Ghana where religion affected unsafe abortion significantly [7]. Young women are most at risk of unintended pregnancies in sub-Saharan Africa including Ghana. This is because they are unable to negotiate safe sexual practices including contraceptive use due to their religious affiliation. They also do not have adequate access to information and services on reproductive health [11]. Although the abortion law in Ghana is fairly liberal, young women who need to terminate pregnancies, still use unsafe means. This can be attributed to the fact that they do not know about the conditions permitting access to safe and legal abortion care [31].

Again the findings revealed that educational level was influenced unsafe abortion. The finding supports a study where eeducational level was a significant predictor of unsafe abortion [29]. Prevalence of unsafe abortion is higher among women with lower level of education. There is a steady decline in the prevalence of unsafe abortion as a woman attained more education [28]. These findings are comparable to those in Nigeria where more than half of women with unsafe abortion had the highest educational level as secondary compared to tertiary education [25].

In Ethiopia, more educated women were less likely to have induced an abortion unsafely [33]. Similarly in the United Kingdom, it was documented that, women who were less educated tended to have repeated abortions, which were mostly unsafe [18]. These findings are due to the fact that contraceptive use among educated women is high which further reduces their risk of unwanted pregnancies [18].

In the analysis of education and contraceptive use among women in Ghana, Madagascar and Zambia, educated women were found to be more likely to choose more effective methods of contraception compared to uneducated ones [16]. Women who are better educated are more empowered, may have better understanding of the abortion law and the conditions under which they can obtain a safe abortion.

Income level also affected unsafe abortion as stated by the majority of the respondents. This finding supports other studies where lack of financial resources to seek appropriate care made them resort to poorly equipped facilities with unskilled providers or self-induce the abortion contributed to unsafe abortion [12]. The risks associated with having an unsafe abortion are outweighed by fear of parental and societal disapproval, burden of childbearing and truncation of their education for many young girls [11].

5. CONCLUSION

Health facility determinants of unsafe abortion, majority of the respondents' health workers perception about unsafe abortion did affect unsafe abortion. Also, inexperienced health workers caused unsafe abortion. High cost of safe abortion at the health facilities caused unsafe abortion according to the majority of the respondents. Health workers poor attitude towards patients also affected unsafe abortion. It is concluded that if health workers improve upon their attitude, competence and reduce cost of health care, unsafe abortion among women would be reduced.

The study also revealed some sociocultural factors associated with unsafe abortion. Culture, early marriage, lack of money and religion were statistically associated with unsafe abortion. Dealing with these sociocultural characteristics appropriately in the various communities can go a long way to reduce unsafe abortion.

Most of the sociodemographic characteristics like age, educational status, religion etc of the respondents affected unsafe abortion. This implies that any woman can experience unsafe abortion irrespective of her demographic features.

6. RECOMMENDATIONS

- i. More female counselling sessions need to be made available by the Ministry of Health and Ghana Health Service to sensitize them on the dangers of unsafe abortion and address the unmet needs for contraception. Organization of school outreaches, evening and weekend sessions by the community health nurses would increase the education being provided especially for women within their fertility age.
- ii. Health workers should improve upon their attitude towards clients seeking for safe abortion at their facility to reduce unsafe abortion among women.
- iii. Ministry of Health and Ghana Health Service should increase public awareness about the legal context within which safe and legal abortion services can be provided.
- iv. Ghana Health Service should build the capacity of service providers through training to recognize family planning as an integral part of clients' care.

7. LIMITATIONS OF THE STUDY

It was challenging getting respondents to testify that they had engaged in unsafe abortion however, with confidentiality assurance, most of the respondents were able to answer questions tactfully. Also, because of potential reporting bias, data from the facility were reviewed to compliment the primary data to reduce bias.

CONSENT AND ETHICAL APPROVAL

Ethical clearance was sought from the Ghana Health Service Ethics Review Committee, Research and Development Division with identification number GHS-ERC: 022/02/24. Also, Central Regional Health Directorate and Dunkwa Municipal Hospital Administrator were contacted for permission. Participants were given the free will to participate and withdraw. Participants were assured of anonymity and privacy. In that case participants were not made to write their names and other personal

information that could disclose their identity on the questionnaire forms. It was explained to the leadership and the respondents that the results of the study were for academic purposes.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Abdissa Mizana B, Woyecha T, Abdu S. Delay in decision and determinants for safe abortion among women at health facilities in south West Ethiopia: facility based cross sectional study. 2020; 17(1):33.
2. Adde P, Kofuor SH. Darteh, Kumi-Kyereme, Amu. Shaping legal abortion provision in Ghana: using policy theory to understand provider-related obstacles to policy implementation. *Heal Res Poli and Syst.* 2020;11:23.
3. Adinma JIB, Ikeako L, Adinma ED, Ezeama CO, Ugboaja JO. Awareness and practice of post abortion care services among health care professionals in Southeastern Nigeria. *Southeast Asian Journal of Tropical Medicine and Public Health.* 2019;41(3):696–704.
4. Adisah-Atta, Dim BS. Delay in decision and determinants for safe abortion among women at health facilities in south West Ethiopia: Facility based cross sectional study. 2019;020-1122.
5. Ahmed S, Li Q, Liu L, Tsui AO. Maternal deaths averted by contraceptive use: an analysis of 172 countries. *Lancet*, 380(9837), 2021;111–125.
6. Akande OE. Reducing morbidity and mortality from unsafe abortion in Nigeria. *Archives 77 of Ibadan Med*, 2018;2:3–11.
7. Banerjee SK, Andersen KL. Exploring the pathways of unsafe abortion in Madhya Pradesh, India. *Global Public Health*, 2018;7(8):882–896.
8. Aniteye P, Mayhew SH. Shaping legal abortion provision in Ghana: using policy theory to understand provider-related obstacles to policy implementation. *Heal Res Poli and Syst.* 2023;11, 23.
9. Aniteye Patience, Mayhew S. Attitudes and experiences of women admitted to hospital with abortion complications in. source: *African Journal of Reproductive Health /La Revue Africaine de La Santé Reproductive.* 2017;15(1):47–55.
10. Atakro CA, Addo SB, Aboagye SJ, Menlah A, Garti I, Amoa-Gyarteng GK, Boni GS. Contributing factors to unsafe abortion practices among women of reproductive age at selected district hospitals in the Ashanti region of Ghana. *BMC Women's Health.* 2019;19(60).
11. Bankole A, Kayembe P, Chae S, Owolabi O, Philbin J, Mabika C. The severity and management of complications among postabortion patients treated in Kinshasa Health Facilities. *Perspectives on Sexual and Reproductive Health.* 2018; 44(1):1–9.
12. Berer M. Provision of abortion by mid-level providers: International policy, practice and perspectives. *Bull World Health Organ.* 2017;87:58–63.
13. Bhattarai P. Factors associated with use of maternal health services in nepal: analysis of the 2016 Nepal demographic and health survey. *Journal of Nepal Health Research Council.* 2018;17(3): 301–307.
14. Chavkin W, Baffoe P, Awoonor-Williams K. Implementing safe abortion in Ghana: We must tell our story and tell it well. *International Journal of Gynecology and Obstetrics* 2018;143 (1).
15. Chiweshe M, Macleod C. If You choose to abort, you have acted as an instrument of satan': Zimbabwean Health Service Providers' Negative Constructions of Women Presenting for Post Abortion Care. *International Journal of Behavioral Medicine.* 2020;24(6):856–863.
16. Cleeve M, Nalwadda C, Zadik Z, Klingberg-Allvin. If You choose to abort, you have acted as an instrument of satan': Zimbabwean health service providers' negative constructions of women presenting for post abortion care. *International Journal of Behavioral Medicine.* 2019;24(6):856–863.
17. Grimes DA, Benson J, Singh S, Romero M, Ganatra B, Okonofua FE, Shah I. Unsafe abortion: The preventable

- pandemic. *The Lancet*. 2019;368:1908–1919.
18. Henshaw SK, Adewole I, Singh S, Bankole A, Oye-Adeniran B, Hussain R. Severity and cost of unsafe abortion complications treated in Nigerian Hospitals. In *Family Planning Perspectives*. 2018;34.
 19. Ghana Statistical Service (GSS), Ghana Health Service (GHS). *Ghana Maternal Health Survey Key Indicators; 2017. Ghana Maternal Health Survey*. 219;35(3).
 20. Girvin TH. *Abortion in Ghana. Issues in Brief* (Alan Guttmacher Institute). 2020;(2):1–4.
 21. Jejeebhoy SJ, Kalyanwala S, Zavier AJF, Kumar R, Jha N. Experience seeking abortion among unmarried young women in Bihar and Jharkhand, India: Delays and disadvantages. *Reproductive Health Matters*. 2019;18(35):163–174.
 22. Kabiru CW, Ushie BA, Mutua MM, Izugbara CO. Previous induced abortion among young women seeking abortion-related care in Kenya: A cross-sectional analysis. *BMC Pregnancy and Childbirth*. 2018;16(1):104.
 23. Kalu CA, Umeora OU, Sunday-Adeoye I. Experiences with provision of postabortion care in a university teaching hospital in south-east Nigeria: A five year review. *African Journal of Reproductive Health*. 2020;16(1):105–112.
 24. Meffen K, Burkhardt G, Id SB. *Abortion care in Haiti: A Secondary Analysis of Demographic and Health Data*. 2018;1–13.
 25. Millimouno TM, Leno JP, Sidibe S, Bah OH, Delamou A, Hyjazi Y. Assessment of post-abortion care services in two health facilities in Conakry, Guinea. *African Journal of Reproductive Health*. 2020;24(2):96–105.
 26. Mills S, Williams JE, Wak G, Hodgson A. Maternal mortality decline in the Kassena-Nankana district of Northern Ghana. *Maternal Child Health Journal*. 2018;12, 577.
 27. Mizana RAS, Woyecha ES, Abdu K. Overview of the law and availability of abortion services in Ghana. *Ghana Medical Journal*. 2020;40(3):80–86.
 28. Mutua, Michael Mbithi, Manderson L, Musenge E, Ochieng Achia TN. Policy, law and post-abortion care services in Kenya. *PLoS ONE*. 2017;13(9): 1–18.
 29. Owolabi OO, Biddlecom A, Whitehead HS. Health systems' capacity to provide post-abortion care: a multicountry analysis using signal functions. *The Lancet Global Health*. 2019;7(1): e110–e118.
 30. Oyeniran AA, Bello FA, Oluborode B, Awowole I, Loto OM, Irinyenikan TA, Fawole B. Narratives of women presenting with abortion complications in Southwestern Nigeria: A qualitative study. *Plos One*. 2019;14(5):e0217616.
 31. Oppong-Darko P, Ampona-Achiano K, Darj E. "I am ready and willing to provide the service though my religion frowns on abortion"-Ghanaian midwives' mixed attitudes to abortion services: A qualitative study. *International Journal of Environmental Research and Public Health*. 2020;14(12).
 32. Shah, I., & Ahman, E. Unsafe abortion: global and regional incidence, trends, consequences and challenges. *Journal of Obstetrics and Gynaecology Obstet Gynaecol Canada*. 2019;31(12), 1149–1158.
 33. Sully E, Dibaba Y, Fetters T, Blades N, Bankole A. Playing it Safe: Legal and clandestine abortions among adolescents in Ethiopia. *Journal of Adolescent Health*. 2018;62(6):729–736.
 34. Tang L, Wu S, Li J, Wang K, Xu J, Temmerman M, Esther DR. Post-abortion family planning counselling practice among abortion service providers in China: a nationwide cross-sectional study. *European Journal of Contraception and Reproductive Health Care*. 2017;22(1):24–29.
 35. Tesfaye G, Hambisa MT, Semahegn A. Induced abortion and associated factors in health facilities of Guraghe Zone, Southern Ethiopia. 2020;14(6).
 36. Ushie BA, Izugbara CO, Mutua MM, Kabiru CW. Timing of abortion among adolescent and young women presenting for post-abortion care in Kenya: A cross-sectional analysis of nationally-representative data. *BMC Women's Health*. 2018;18(1):1–8.
 37. Wang L, Xiong J. Post-abortion family planning counselling practice among abortion service providers in China: a nationwide cross-sectional study. *European Journal of Contraception and Reproductive Health Care*. 2020;22(1):24–29.
 38. World Health Organization. *Unsafe abortion: Global and regional*

- estimates of the incidence of unsafe abortion and associated mortality in 2008. Geneva, Switzerland. 2020; 3(44).
39. World Health Organization. Clinical practice handbook for safe abortion (2nd edition); 2019.
40. Hagos D, Grossman D, Levin C, Blanchard K, Adanu R, Goldie SJ. Cost effectiveness analysis of unsafe abortion and alternative first-trimester pregnancy termination strategies in Nigeria and Ghana. African Journal of Reproductive Health. 2018;14 (2):85–103.

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Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/123295>