Original Research Article

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Socio-demographic factors influencing abortion practices among women attending Mbagathi Hospital, Nairobi County, Kenya

Douglas S. Okenyoru^{1*}, Vincent Matoke², Claire Wekesa³, Lucy Murugi⁴, Felix Odhiambo⁵, Sharon J. Kemboi⁶

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*Correspondence:

Dr. Douglas S. Okenyoru,

E-mail: d.s.okenyoru@gmail.com

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ABSTRACT

Background: Abortion is a global health concern with complex implications, particularly in countries like Kenya, where legal restrictions coexist with prevalent unsafe practices. Despite Kenya's high maternal mortality ratio linked to unsafe abortions, little research has explored the socio-demographic factors influencing this issue. This study investigates these dynamics among women at Mbagathi Hospital in Nairobi County, emphasizing the pressing need for targeted interventions within the legal framework.

Methods: A descriptive cross-sectional study was employed. This study focused on women aged 18–49, utilizing a census approach at Mbagathi Hospital's gynecology clinic. The study aimed for 100% precision, resulting in 49 respondents chosen through the purposive sampling method among women aged 18–49 with a history of abortions. Abortion practices were identified as safe and unsafe, and data was collected through a well-structured questionnaire and analyzed using statistical package for the social sciences (SPSS) 22.0. The data was presented in tables and pie charts

Results: The study revealed an unsafe abortion rate of 38.8%. The predictors of abortion practices based on sociodemographic factors were; age (AOR=6.170, p=0.002), marital status (married; AOR=0.438, p=0.025; divorced/widowed/separated; AOR=0.063, p=0.001) and number of children (AOR=0.379, p=0.007).

Conclusions: This study revealed that the socio-demographic factors that predicted abortion practices were; age (AOR=6.170, p=0.002), marital status (married; AOR=0.438, p=0.025; divorced/widowed/separated; AOR=0.063, p=0.001) and number of children (AOR=0.379, p=0.007).

Keywords: Abortion, Abortion practices, Socio-demographic factors, Mbagathi County Hospital, Nairobi County

INTRODUCTION

The World Health Organization (WHO) defines abortion as the termination of pregnancy before 20 weeks of gestation or the birth of a fetus weighing less than 500 g, which is a contentious and complex issue worldwide.¹

Abortion can manifest in different ways, ranging from spontaneous to induced procedures, each with its own set of health implications.² In contemporary society, abortion is a contentious issue with significant public health implications, particularly in countries like Kenya. Despite legal restrictions, unsafe abortions remain prevalent, posing risks to women's health due to procedures often

¹Department of Community Health and Development, The Catholic university of Eastern Africa, Kenya

²School of Health Sciences, Kenyatta University, Nairobi, Kenya

³School of Nursing, Faculty of Science, The Catholic University of Eastern Africa, Kenya

⁴Partners for Health and Development, Africa, Kenya

⁵Department of Family Medicine, Community Health, and Epidemiology, Kenyatta University, Nairobi, Kenya

⁶North star Alliance East Africa, Kenya

conducted without the necessary expertise or in substandard settings.³ The global prevalence of unsafe abortions, estimated at 22 million annually, contributes significantly to maternal morbidity and mortality, particularly in sub-Saharan Africa.⁴ The socio-political climate in different countries influences the safety and accessibility of abortion services, with unsafe abortion defined by the WHO as procedures lacking necessary skills or conducted in substandard environments.^{5,6} On the other hand, a safe abortion is defined as a procedure carried out by trained healthcare providers in sanitary conditions to prevent complications and ensure the health and safety of the woman.⁶

Kenya grapples with a distressing reality as its maternal mortality ratio stands at 362 per 100,000 live births, reaching its peak among women aged 25–39. Shockingly, up to 17 percent of deaths in this crucial demographic are associated with induced abortions. This staggering statistic paints a grim picture, placing Kenya among the nations with the highest incidence of unsafe abortions in Africa. Alarming is the fact that a significant majority of women seek healthcare with complications ranging from moderate to severe. It is imperative that we address this crisis urgently and implement measures to ensure the wellbeing and safety of women in their reproductive prime. This study aims to investigate the socio-demographic factors influencing abortion practices among women attending Mbagathi Hospital, Nairobi County, Kenya.

METHODS

Study design and setting

The study employed a cross-sectional descriptive approach. The study was carried out at Mbagathi Hospital in Nairobi County, Kenya from January to April 2024. The gynecology department/clinic was specifically chosen from among 15 departments because it serves women seeking reproductive health services, including postabortion care. Although abortion is heavily restricted in Kenya, it is permitted under certain circumstances to save a woman's life or for emergency treatment. However, the gynecology clinic provides care to post-abortion women (women who have undergone illegal abortion elsewhere), such as managing complications and providing guidance and counseling.

Participants and sampling technique

The study population consisted of women of reproductive age (18 to 49 years old) seeking gynecological care at the gynecologic clinic. Participants were recruited specifically from the gynecology clinic, where they sought services. Participants were chosen using consecutive sampling methods, in which every woman who met the inclusion criteria and sought care at the gynecology clinic during the study period was selected until the required sample size was achieved.

Inclusion and exclusion criteria

The inclusion criteria required participants aged 18 to 49 years old with a history of abortion to be available for data collection during the study period. Exclusion criteria omitted individuals who were very sick or had mental health issues. Participants had to provide voluntary written consent and be available for an interview. Women's histories of abortion were self-reported to identify eligible participants before the study commenced.

Data sources and measurements

Data collection took place in the gynecology clinic. Women were recruited specifically for the study as they came to the clinic for services. The women's point of contact was their visits to the gynecology clinic, where they sought various services, including but not limited to post-abortion care. Data were collected through a well-structured questionnaire administered by trained research assistants at the gynecology clinic.

Study size

The sample size was calculated using Cochran's formula, yielding 49 individuals from the gynecological department.¹⁰

Sample size =
$$Z^2 \times P(1-P)/E^2$$

The sample size calculation was based on a 95% confidence level with a normal deviation (Z) of 1.96. Safe abortion was estimated at 97% (p=0.97), with the proportion of unsafe abortion serving as a measure of variability (Q=1-P). The allowable error range (E) was set at 5% (0.05). When these values were applied to the formula, the initial estimated sample size was 44.7. To round up, the sample size was determined to be 45 participants. To accommodate for potential non-response and incomplete surveys, the sample size was increased by 10%, resulting in a final sample size of 49 participants.

Statistical methods

The data was analyzed using IBM statistical package for the social sciences (SPSS) 22.0. The data were summarized using descriptive statistics such as frequencies and proportions. Inferential analysis, including the Chisquare test and regression, was used to investigate relationships between variables with a significance level of p < 0.05.

Ethical consideration

Before data collection began, ethical approval was obtained from the Kenyatta National Hospital-University of Nairobi Ethics and Research Committee (KNH-UoN ERC) with number UP288/03/2023, the National Commission for Science, Technology, and Innovation

(NACOSTI) with license No. NACOSTI/P/23/27415, and Nairobi County and Mbagathi Hospital permission. The participants gave their written informed consent, and confidentiality was maintained throughout the study.

RESULTS

Distribution of socio-demographic factors

The result reveals that the 37–45 age bracket constitutes the largest proportion of participants, with 23 (46.9%) respondents, followed by the 26-36 age bracket, with 19 (38.8%) participants. Christians represent the majority in terms of religion, with 42 (85.7%) participants, followed by Muslims, with 4 (8.2%) participants. The marital status is predominantly single, with 25 (51.0%) participants, followed by married individuals, with 17 (34.7%) participants. Regarding the number of children, the majority of participants, 27 (55.1%), have one child, while 12 (24.5%) have two or more children. Tertiary education is the most common educational level, with 20 (40.8%) participants, followed by secondary education with 16 (32.7%) participants. In terms of occupation, selfemployment prevails, with 33 (67.3%) participants, followed by employees, with 14 (28.6%) participants. Regarding monthly income, the largest group earns above 30,000 Kshs, with 27 (55.1%) participants, followed by the 10,001–20,000 Kshs range, with 10 (20.4%) participants. Lastly, regarding residence, rural areas host the majority, with 26 (53.1%) participants, followed by urban settings, with 23 (46.9%) participants (Table 1).

Responses on safe abortion practice

The results revealed that pre-abortion counseling and advice, the majority reported the highest cases, with 32 (65%) participants, followed by those who disagreed, with 17 (35%) participants. Regarding the presence of skilled providers, the majority agreed, with 34 (69%) participants, while 15 (31%) participants did not agree. In terms of all abortions being performed in hygienic conditions, the majority agreed, with 46 (94%) participants, while 3 (6%) participants disagreed. Regarding the non-insertion of objects into the uterus, the majority agreed, with 38 (78%) participants, while 11 (22%) participants disagreed. Concerning the avoidance of self-induced procedures, the highest proportion agreed, with 45 (92%) participants, followed by 4 (8%) participants who disagreed. In terms of the availability of immediate intervention in case of emergencies, the majority agreed, with 41 (84%) participants, while 8 (16%) participants disagreed. Finally, regarding the provision of post-abortion care, the majority agreed, with 35 (71%) participants agreeing and 14 (29%) disagreeing (Table 2).

Abortion practices

The findings showed that the majority of participants (30, 61.2%) practiced safe abortion, while 19 (38.8%) participants, practiced unsafe abortion (Figure 1).

Table 1: Socio-demographic characteristics among participants (n=49).

Characteristics	Frequency (N)	Percent (%)
Age in years	(IN)	(%)
18-25	6	12.2
26-36	19	38.8
37-45	23	46.9
Above 46 years	1	2.0
Religion	1	2.0
Christian	42	85.7
Muslim	4	8.2
Others	3	6.1
Marital status		0.1
Single	25	51.0
Married	17	34.7
Widowed/separated/		
divorced	7	14.3
No. of children		
1 child	27	55.1
2-3 children	12	24.5
More than 3 children	3	6.2
No child	7	14.2
Level of education		
No formal education	5	10.2
Primary level	8	16.3
Secondary level	16	32.7
Tertiary level	20	40.8
Occupation		
Unemployed	2	4.1
Employed	14	28.6
Self-employed	33	67.3
Monthly income		
Below 10,000	9	18.4
10,001-20,000	10	20.4
20,001-30,000	3	6.1
Above 30,000	27	55.1
Residence		
Urban	23	46.9
Rural	26	53.1

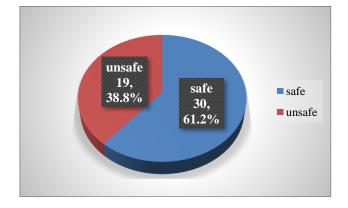


Figure 1: Abortion practices (n=49).

Table 2: Responses on safe abortion practice among participants (n=49).

Characteristics of safe abortion practices and response	Frequency (N)	Percentage (%)	
Pre-abortion counseling	and advices		
Yes	32	65	
No	17	35	
Under skilled provider			
Yes	34	69	
No	15	31	
Provided in hygiene cond	dition		
Yes	46	94	
No	3	6	
No insertion of objectives into the uterus			
Yes	38	78	
No	11	22	
Not self-induced			
Yes	45	92	
No	4	8	
Availability of immediat	e intervention	in case of	
emergency			
Yes	41	84	
No	8	16	
Provision of post abortio	n and care		
Yes	35	71	
No	14	29	

Association between socio-demographic characteristics and the abortion practices

The results revealed that age group, 18-25 years had a higher proportion engaged in unsafe abortions, with 6 (21%) participants, followed by the age group 37-45 years, with 11 (14%) participants. This showed a significant association between age group and abortion practices (χ^2 =13.894, p=0.003). In terms of religious affiliation, the majority of Christians reported engaging in unsafe abortions, with 16 (33%) participants, followed by other religions with 3 (6%) participants, indicating a statistically significant association with abortion practices ($\chi^2=7.278$, p=0.026). Regarding marital status, participants who were widowed, separated, or divorced, and those who were single demonstrated a higher incidence of unsafe abortions, with 7 (14%) participants respectively, followed by married participants, with 5 (10%) participants. This marital status discrepancy was significantly associated with abortion practices ($\chi^2=12.903$, p=0.002). Concerning the number of children, those with only 1 child and 2-3 children had a higher prevalence reporting unsafe abortions, with 7 (14%) participants respectively, followed by individuals with more than 3 children, with 3 (6%) participants. This showed a significant association between the number of children and abortion practices ($\gamma^2=8.855$, p=0.031). Also, in educational levels, participants with secondary and tertiary education reported high cases of unsafe abortions, with 7 (14%) participants respectively.

Table 3: Association between socio-demographic characteristics and the abortion practice.

Characteristics Safe (n=30, %=61.2) %=38.8 Df P value		Practice o	f abortion	Chi square
18-25	Characteris- tics	Safe (n=30,	(n=19,	Df
X2=13.894a Df=3 P*=0.003	Age in years			
Df=3	18-25		6(21)	Y2_13 80/1a
37-45				
Religion Christians 26 (53) 16 (33) X2=7.278a Muslims 4 (8) 0 Df=2 Others 0 3 (6) P*=0.026 Marital status Single 18 (37) 7 (14) Married 12 (24) 5 (10) Df=2 Widowed/separa ted/divorced 0 7 (14) Widowed/separa ted/divorced 0 7 (14) Widowed/separa ted/divorced 0 7 (14) Vidowed/separa ted/divorced 0 2 (4) Vidowed/separa te		12 (24)		
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Below 10, 000 5 (10) 4 (8.1) Kshs 10,001- 4 (8) 6 (12)	Urban	10 (20)	13 (27)	
Kshs 10,001-	Monthly income			
		5 (10)	4 (8.1)	
2.000	Kshs 10,001- 20,000	4 (8)	6 (12)	$X^2=3.008^a$
Kshs 20,001- 30,000 2 (4) 1 (2) Df=1 P*=0.390	Kshs 20,001-	2 (4)	1 (2)	Df=1
Above Kshs 30,000 19 (39) 8 (16)	Above Kshs	19 (39)	8 (16)	

P*=Fisher exact

However, this did not show a significant statistical association between education level and abortions (χ^2 =1.454, p=0.693). Occupation-wise, self-employed participants reported a higher percentage of unsafe abortions, with 13 (27%) participants, followed by

employed participants, with 4 (8.1%) participants. Though, the association between occupation and the practice of abortion did not reach statistical significance ($\gamma^2=3.777$, p=0.151). Regarding residence, a higher percentage of participants in urban areas (13, 27%) reported engaging in unsafe abortions, followed by participants in rural areas (6, 12%). This showed a statistically significant association between residence and the practice of abortion ($\chi^2=5.750$, p=0.016). Finally, in terms of income levels, participants earning above Kshs 30,000 reported a high number practicing unsafe abortions, with 8 (16%) participants, followed by that earning Kshs 10,001-20,000 monthly, with 6 (12%) participants. Despite variations in reported percentages, the level of income did not show a significant association with abortion practices ($\chi^2=3.008$, p=0.390). The results are shown in Table 3.

Predicators for abortion practices

All variables that had a significant association with abortion practices in the preliminary analysis (Chi square)

were run through a logistic regression in order to identify the predictors of abortion practice. The logistic regression analysis reveals several factors significantly associated with unsafe abortion practices. Women aged 46-49 years show a substantial increase in the likelihood of engaging in unsafe abortions (AOR=6.170, CI=2.154-17.433, p=0.002) compared to younger women aged 18-25 years. Marital status also plays a significant role, with single women having higher odds of unsafe abortions compared to married women (AOR=0.438, CI=0.204-0.871, p=0.025) and those who are divorced, widowed, or separated (AOR=0.063, CI=0.015-0.278, p=0.001). Furthermore, having fewer children, specifically 2–3 children, significantly reduces the likelihood of unsafe abortions (AOR=0.379, CI=0.188-0.766, p=0.007) compared to having no children. However, religion and residence did not show significant associations with unsafe abortion practices. Overall, older age, being single, and having fewer children are associated with a higher likelihood of unsafe abortions. Table 4 below shows the results.

Table 4: Logistic regression of factors associated with abortion practices.

Independent variables	D	C E	Wald	Sig.	AOD	95% C.I. for OR	
	В	S.E.	Wald		AOR	Lower	Upper
Age in years							
18-25	Reference						
26-36	1.137	0.509	5.001	0.075	3.119	1.232	9.450
37-45	.271	0.692	0.303	0.052	1.311	0.500	3.442
46-49	1.867	0.561	13.072	0.002*	6.170	2.154	17.433
Religion							
Christians	Reference						
Muslims	-0.189	0.341	0.308	0.479	0.327	0.324	1.514
Others	-20.268	0.480	150.568	0.077	0.103	0.049	0.314
Marital status							
Single	Reference						
Married	-0.846	0.379	50.014	0.025*	0.438	0.204	0.871
Divorcee/widow/separated	-20.875	0.840	120.970	0.001*	0.063	0.015	0.278
Number of children							
No child	Reference						
1 child	-0.795	0.294	60.31	0.311	0.487	0.123	0.876
2-3 children	-0.970	0.359	70.302	0.007*	0.379	0.188	0.766
More than 3 children	-0.629	0.493	10.629	0.202	0.533	0.203	1.401
Residence							
Rural	Reference						
Urban	-0.399	0.246	20.614	0.106	0.671	0.414	1.088
Urban *P value < 0.05	-0.399	0.246	20.614	0.106	0.671	0.414	1

^{*}P value ≤0.05

DISCUSSION

The study investigates the complex associations between a variety of sociodemographic variables and abortion practices among women who visit Mbagathi County Hospital in Nairobi County, Kenya. It is critical to analyze these findings in light of Kenyan law, which prohibits abortion except in circumstances where it is required to save the mother's life. Even though the study revealed that

the majority of the participants practiced safe abortion, a significant number practiced unsafe abortion, which is attributed to age, religion, marital status, number of children, and residence. According to the age distribution, it has been highlighted as a significant factor impacting abortion practices, with participants aged 18 to 25 having a greater rate of unsafe abortions. This was discovered to be strongly associated with abortion practice. This finding encouraged a more comprehensive investigation into the

factors that contribute to differences in reproductive decision-making among this age group. Younger people frequently faced different socioeconomic problems, such as restricted access to comprehensive reproductive health education, budgetary restraints, and societal pressures, which may have contributed to an increased risk of engaging in unsafe abortion practices. Furthermore, these findings were consistent with current evidence, underscoring the significance of adjusting reproductive health policy to meet the unique requirements of different age groups, especially when legal abortion limitations may have exacerbated the obstacles faced by young women. 11

In terms of religion, Christians had a greater rate of unsafe abortions than Muslims and people of other religions, indicating a substantial relationship. This exemplified the complexities of reproductive decision-making within the context of religious beliefs. It was critical to approach this result with an in-depth awareness of the various points of view within the Christian community, realizing that perceptions of religious teachings on abortion may differ greatly. The findings were consistent with previous research that stressed the impact of religious views in determining people's attitudes about reproductive health choices, with some studies stressing the possible influence of fundamentalist religious doctrines on the stigma around abortion.¹¹

In terms of marital status, the study found that participants who were single, widowed, separated, or divorced had a higher incidence of unsafe abortions than married participants. This significant association emphasizes the complex interplay between marital status and reproductive decision-making. These findings are consistent with a previous study, which found that people who are unmarried or have non-traditional marital status face unique challenges, such as potential stigma, limited social support, and financial constraints, which may contribute to a higher likelihood of engaging in unsafe abortion practices.⁴

Participants who had only one child reported a higher rate of unsafe abortions depending on the number of children. The study highlights the complex dynamics of family size and reproductive decision-making, providing light on the unique obstacles that individuals with one child face. This finding aligns with the existing findings, which suggest that individuals with a limited number of children may face increased societal expectations, economic strains, or difficulty accessing comprehensive reproductive health services, all of which may contribute to a higher likelihood of engaging in unsafe abortion practices.¹²

In terms of educational level, those with secondary and tertiary education reported a high rate of unsafe abortions. However, the absence of statistical significance in the association between education level and unsafe abortions necessitates a more sophisticated investigation into the intricate interaction of factors impacting reproductive decision-making. While the lack of statistical significance

implies that the observed variation is attributable to chance, it is critical to recognize the multidimensional nature of educational influences on abortion practices. These findings contradict previous research, which suggests that education can play a dual role: it can be an empowering force by increasing awareness, access to information, and decision-making autonomy, but it can also contribute to increased societal expectations and economic pressures, which can influence reproductive choices.¹³

In relation to occupation, self-employed people had a higher rate of unsafe abortions than other workers. although this difference was not statistically significant. However, the lack of statistical significance in the relationship between work and abortion practices necessitates a more nuanced examination of the complex dynamics that underpin reproductive decision-making within the professional environment. While the lack of statistical significance implies that the observed variation was attributable to chance, it is critical to recognize the multidimensional nature of occupational factors on abortion practices. This study is consistent with a previous study, which suggests that occupational factors such as job insecurity, irregular working hours, and a lack of employee benefits can contribute to increased stress and financial constraints, potentially influencing people's abortion decisions.14

In terms of residence, the results show that participants living in urban settings reported a high percentage of unsafe abortions, indicating a significant association. This study emphasizes the complex interplay of urban settings and reproductive decision-making, as well as the importance of gaining a thorough understanding of the elements that contribute to the observed gap. The study supports previous research that suggests that living in cities may have some benefits, like easier access to healthcare facilities, but it may also have some unique socioeconomic problems, like higher living costs, more social pressures, and possible differences in reproductive health education.¹¹

In regard to income, participants earning more than Kshs 30,000 reported a high rate of unsafe abortions. Despite differences in reported prevalence across income groups, the overall relationship between income and abortion practices was not statistically significant. Though income is an important factor in obtaining healthcare and making reproductive decisions, the lack of statistical significance indicates that the observed difference could be influenced by factors other than financial considerations. The findings differ from the previous study, which emphasized the complicated association between money, access to knowledge, and cultural expectations, demonstrating that a complex interaction of these components influences abortion decision-making. ¹⁴

From the logistic regression other predictors were identified. Women aged 46–49 years have a notably higher

likelihood of engaging in unsafe abortions compared to younger women aged 18–25 years. This age group likely faces different socio-economic and health challenges that may influence their decision-making regarding abortion, potentially leading to higher risks associated with unsafe procedures. This is in congruence with a study conducted in Kenya, which found similar variations in abortion safety based on age, with older women facing higher risks due to health issues and socioeconomic challenges.¹⁵

Marital status emerges as another critical factor, with single women showing higher odds of unsafe abortions compared to married women and those who are divorced, widowed, or separated. This finding suggests that the support and stability provided by marriage or previous marital experience may contribute to safer abortion practices by enabling access to resources and support networks. This contradicts a review published by Muga and Jenkins in 2020, which found that social and economic factors, such as marital status, influence women's access to safe abortion services. ¹⁶

Additionally, having fewer children, specifically 2–3 children, significantly reduces the likelihood of unsafe abortions compared to having no children. This may indicate that women with some child-rearing experience are more likely to prioritize safer reproductive health practices. Contrary to this viewpoint, Mutua et al found that multiparity among Kenyan women is frequently associated with limited reproductive health options and decision-making autonomy, potentially leading to higher rates of unsafe abortions due to socioeconomic pressures and a lack of comprehensive family planning services. ¹⁷

In terms of religion, the finding did not show statistically significant associations with unsafe abortion practices, suggesting that religious beliefs or affiliations may not independently dictate women's decisions regarding abortion safety. This aligns with recent research indicating that while religious views can influence attitudes towards abortion, they may not always correlate with actual behaviors related to abortion practices.¹⁸

On the other hand, the lack of statistically significant associations between residence (urban versus rural) and unsafe abortion practices indicates that geographical location alone may not be a decisive factor in whether women resort to unsafe abortion methods. This finding underscores the importance of considering broader contextual factors, such as access to healthcare services, socio-economic conditions, and cultural norms, in understanding reproductive health outcomes across different settings. ^{19,20}

CONCLUSION

In conclusion, this study delves into the sociodemographic factors influencing abortion practices among women in Mbagathi County Hospital, Nairobi, Kenya. The study concludes that a significant number of women practiced unsafe abortions (38.8% of participants). The study further concludes that the socio-demographic factors that predicted abortion practices were; age (AOR=6.170, p=0.002), marital status (married; AOR=0.438, p=0.025; divorced/widowed/separated; AOR=0.063, p=0.001) and number of children (AOR=0.379, p=0.007).

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