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Women's knowledge and attitude towards unsafe abortion in the farming communities of Ile-Ife, Southwest Nigeria

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Abstract

Unsafe abortion is a public health concern due its effects on women's health and maternal morbidity and mortality. A community-based cross-sectional study was carried out to assess the knowledge and attitudes of unsafe abortion among women in the farming communities of Ile-Ife, southwest, Nigeria. Self-administered questionnaire that was pretested was used in collecting information from 310 respondents. The samples were achieved using a simple random sampling technique from December to January, 2023. The data were collected by face-to-face survey and analyzed by STATA version 17. The knowledge and attitude of respondents on unsafe abortion were presented using simple proportion and frequency. The mean age of the respondent was 28.8±5.55. Overall, the findings suggest that age (OR=0.05, 95% CI=0.01-0.42, p=0.005), education (OR=0.04, 95% CI=0.00-0.35, p=0.004), marital status (OR=0.06, 95% CI=0.00-0.90, p=0.042) and ever been pregnant (OR=0.06, 95% CI=0.00-0.90, p=0.042), were significant predictors of poor knowledge of unsafe abortion among rural women in Ile-Ife. The study concluded that there is a need for health education among rural women on unsafe abortion and its associated risks. *(Afr J Reprod Health 2024; 28 [3s]: 45-56).*

Keywords: Abortion, unsafe abortion, rural women, knowledge, attitude and practice

Résumé

L'avortement à risque constitue un problème de santé publique en raison de ses effets sur la santé des femmes et sur la morbidité et la mortalité maternelles. Une étude transversale communautaire a été réalisée pour évaluer les connaissances et les attitudes concernant l'avortement à risque parmi les femmes des communautés agricoles d'Ile-Ife, au sud-ouest du Nigeria. Un questionnaire auto-administré pré-testé a été utilisé pour collecter des informations auprès de 310 répondants. Les échantillons ont été réalisés à l'aide d'une technique d'échantillonnage aléatoire simple de décembre à janvier 2023. Les données ont été collectées par enquête en face-à-face et analysées par STATA version 17. Les connaissances et l'attitude des répondants à l'égard de l'avortement à risque ont été présentées en utilisant une simple proportion et fréquence. L'âge moyen des répondants était de 28,8 ± 5,55. Dans l'ensemble, les résultats suggèrent que l'âge (OR = 0,05, IC à 95 % = 0,01-0,42, p = 0,005), l'éducation (OR = 0,04, IC à 95 % = 0,00-0,35, p = 0,004), l'état matrimonial (OR = 0,06 , IC à 95 % = 0,00-0,90, p = 0,042) et ayant déjà été enceinte (OR = 0,06, IC à 95 % = 0,00-0,90, p = 0,042), étaient des prédicteurs significatifs d'une mauvaise connaissance de l'avortement à risque chez les femmes rurales de l'Île- Ifé. L'étude a conclu qu'il existe un besoin d'éducation sanitaire parmi les femmes rurales sur l'avortement à risque et les risques qui y sont associés. *(Afr J Reprod Health 2024; 28 [3s]: 45-56).*

Mots-clés: Avortement, avortement à risque, femmes rurales, connaissances, attitude et pratique

Introduction

Abortion is the termination of pregnancy before the age of viability[1]. Abortion is the natural, therapeutic, or induced termination of a pregnancy before the fetus has matured into a viable creature outside the uterus or is capable of surviving independently[1]. The outcomes of conception are the early expulsion of the fetus, placenta, and bag of water from the uterus[2]. Unintended pregnancy is a severe threat to women's reproductive health in developing countries[1]. Some young women with unwanted pregnancies have abortions, many of which are conducted in dangerous conditions[2]. Unmarried women from poorer socioeconomic backgrounds, who are in their reproductive years early or late, who do not utilize contraception on a regular basis, and who are enrolled in formal education have higher rates of unwanted births[3]. Abortion rates are rising worldwide, and unplanned pregnancies are

becoming more common. It is estimated that 67,000 women die each year as a result of unsafe abortions, with 48% of all abortions globally rated unsafe[3].

Abortion is still carried out, regardless of its legal status, and approximately half of all abortions are performed by unskilled practitioners, in unclean environments, or both[4]. Unsafe abortion has been defined by the World Health Organization as a procedure for terminating unwanted pregnancy that is performed by someone lacking the necessary skills in an environment lacking minimal medical standard or both[1]. Unsafe abortion claims the lives of tens of thousands of women worldwide each year, leaving many with chronic health problems that deplete the resources of public health care institutions[2]. Each year, around 46 million abortions are performed[5]. Most treatments are carried out in dangerous, clandestine settings, which contributes to Nigeria's high maternal mortality rate, which stands at 575 deaths per 100,000 live births[2].

Abortion is legally restricted in Nigeria and can result in a 14-year prison sentence unless performed to preserve the life of the expecting mother[6]. Abortion is a sensitive topic or issue that cannot be discussed in Nigeria for religious, cultural and moral grounds[6]. Nigeria is primarily composed of Christians and Muslims, both of whom oppose abortion[7]. This makes it much more difficult for adolescents who have previously obtained abortions to want to talk about it; those who want to obtain it travel to places where no one will recognize them, and they want it done as soon as possible to avoid shame and mocking[8]. The majority of these women end up going to places that lack the ability to perform a safe abortion and they later end up with complications[9]. An unsafe abortion can jeopardize a woman's reproductive health and result in serious, life-threatening complications such severe hemorrhage, sepsis, chronic pelvic inflammatory disease, ectopic pregnancy, secondary infertility, and even death[10].

Unsafe abortion is a public health concern because of its dire reproductive health consequences and impact on maternal morbidity and mortality. Tackling this problem will contribute toward achieving Sustainable Development Goal 3.1 which aim to reduce global maternal mortality to less than 70 per 100,000 live births. Due to low literacy rate, inadequate information system, socio-cultural stigma and lack of proper abortion services, women in farming communities who have unintended pregnancy end up having abortion which are mostly done in an unsafe settings and this can reduce the rural population who are the backbone of agriculture which can diminish food security of the community. In rural Nepal the level of knowledge was found significant with the education status and not significant with other demographic variables age, sex, marital status, religion, ethnicity and occupation[11]. It is therefore imperative to determine the knowledge and attitude associated with unsafe abortion in the farming communities of Ile-Ife. It is against the backdrop that this study seeks to add to the existing body of evidence and information on the knowledge and attitude of rural women to abortion practices in the farming communities of Ile-Ife, southwest, Nigeria.

Objectives of the study

The specific objectives are to;

1. determine the knowledge of the rural women to abortion;
2. examine the attitude of the rural women to abortion;

Hypothesis of the study

There is no significant relationship between the sociodemographic characteristics of the respondent and knowledge of unsafe abortion.

Methods

Study design

This study adopted a cross-sectional, descriptive approach to collect data from the participants between December and January 2023. The questionnaire captured socio-demographic characteristics, knowledge about unsafe abortion and attitude of unsafe abortion. The questionnaire was then modified to suit the context of the study after pre-testing it.

Study location

The study was carried out in Erefe, Aroko, Okerenbete, Ogbaagba, Abata-egba, Iyanfoworogi, and Aye-Koka, which are rural area of Ile Ife. Yoruba and English are the languages of the people for official business transactions. Traditionally, people are engaged in agriculture and produce

enough food and cash crops for home consumption, as inputs for agro-allied industries and export. The main cash crops grown in the town are yams, maize, cassava, plantains, cocoa, kola nuts, etc.

Study population

The population for this study was drawn from the women of reproductive ages (15-49 years) in the selected farming communities. The respondents were those who resided in the selected community and were willing to participate in the interview. The respondents signed the consent forms after they had been informed about the study objective.

Sample size calculation

The sample size was calculated using the **Leslie-Kish formula,**

$n=Z^2pq/d^2$

Where n is the desired sample size,
Z is the standard normal deviation taken as 1.96,
P is prevalence is taken as 22% (0.22) from a similar study (WHO, 2012),
q = 1 – p (0.78), and
d is the degree of precision taken as 5% (0.05).
$n = (1.96)^2 \times 0.22 \times 0.78 / (0.05)^2 = 3.8416 \times 0.22 \times 312 = 263.7$
Add 20% (52) for non-response = 315.7
A total of 310 participants were selected for the study.

Data collection procedure

A multi-stage sampling technique was used to select the study population. In the first stage of sampling, two out of four rural LGAs in the farming communities of Ile-Ife were purposively selected for the study. Rural communities in this study were defined as those with population size of 20,000 or less. In the second stage, seven farming communities were randomly selected. The random selection was done using lottery method after listing all the farming communities in the LGAs. The houses in the community were listed and all houses with odd house numbers were picked. In the third stage, three (3) women between 15 to 49 years of age were randomly selected from each house because they are at their reproductive age based on the house listing done in the previous stage.

A pilot study was conducted on 30 rural women to test the consistency of the study's questions with the hypothesis. Additionally, the questionnaire was validated by a public health researcher. The validated and pre-tested questionnaire was randomly distributed among rural women in Atakunmosa West LGA. The responses were kept anonymous and confidential and transferred to an Excel spreadsheet. The questionnaire consisted of three parts: part one gathered sociodemographic data, including age, education level, marital status, household size, occupational status, religion and average monthly income, ever being pregnant, ever had an abortion; part two assessed general knowledge of safe abortion; respondents were asked questions on what they know about abortion, questions like issues that affect reproductive health of women and girls, meaning of abortion, legal provision indications for the provisions of abortion, procedures through which abortion can be procured, types of abortion they regards as safe and access to information about safe abortion; and part three evaluated attitudes towards safe abortion, respondents were asked to indicate their level of agreement (strongly agreed, agreed, disagreed and strongly disagreed) to the attitudinal statements like every woman and girl have the right to decide if, when to have children, and how many, it is the choice of the pregnant woman to keep or abort her pregnancy with the guidance of the clinician, abortion is safe if performed by a trained healthcare provider using the medical or surgical procedure, abortion is an easier way to prove a woman's fertility, unnamed medical abortion pills procured from chemist are safe, self-administered medical abortion is safe and the outcome of abortion done in a health facility by trained provider and by traditional practitioners is the same.

The selection of participants from each community was proportional to size. The data was scripted on open data kit (ODk) and collected electronically from the study sites. The questionnaire was administered face-to-face and translated to the local language for respondents who do not understand English language.

Dependent variables

- Knowledge about unsafe abortion- In this study, knowledge about unsafe abortion was used to

mean what a woman knows about unsafe abortion.
- Attitude towards unsafe abortion- For this study, it is a personal view and feelings towards unsafe abortion.

Independents variables

- Age
- Marital status
- Religion
- Literary level

Data analysis

The data was analyzed on STATA V-17. Chi-square test used to determine the association between dependent and independent variables. P<0.05 was considered statistically significant. Descriptive statistical tools such as frequency counts, percentages, the mean and standard deviation were used to describe the quantitative data collected.

Participants answered 17 knowledge-based questions and 12 questions about their attitudes toward unsafe abortion. Each correct knowledge question response received 1 point, while incorrect or missing responses received 0 points, the maximum knowledge score of 17. For the attitude questions, responses favourable to abortion received 1 point each, while unfavourable or missing responses received 0 points, the maximum attitude score was 12.

The total score on the knowledge and attitude sections were calculated as a percentage of the maximum possible score. Knowledge scores of 50% or higher (at least 9 correct answers out of 17) were categorized as "good knowledge". Scores below 50% were categorized as "poor knowledge". Attitude scores of 50% or higher (at least 6 favourable responses out of 12) were categorized as "favourable attitude". Scores below 50% were categorized as "unfavourable attitude". Logistic regression analysis was carried out to predict knowledge and attitudes towards unsafe abortion in the rural population.

Ethical consideration

Ethical clearance was obtained from the Health Research Ethics Committee of the University of Ibadan, Nigeria (UI/EC/22/0373). The objective of the study was explained to the rural women; then written informed consent was obtained from the study participants.

Results

Sociodemographic characteristics

The age range and the mean age were 15-49 years and 28.8±5.55 respectively. A majority of the respondents were Christian (73.2%), married (73.6%), are from a monogamous family (95.8%) and have had between 0-3 life births (85.8%). Less than half of the respondents completed secondary school education (38.5%) and engage in trading (37.7%).

Knowledge of unsafe abortion

Majority of the respondents have ever heard of the word reproductive health (76.1%), 56.5% of the respondents are knowledgeable of the issues that affect women's ability to have satisfying and safe sex. Above half (62.3%) of the respondent knew that unsafe abortion is an issue that affect women's reproductive health. Majority of the respondents (82.9%) believed that unsafe abortion means any abortion that is induced within the first three months of gestation, less than half (41%) of the respondents source for information about unsafe abortion from neighbourhood nurse while about two third (61.6%) of the respondents knew that unsafe abortion can be procured through the use of misoprostol based on prescription.

Attitude and belief towards unsafe abortion

About two-third (61.9%) of the respondents strongly disagreed that abortion is an easier way to prove a woman's fertility, 60.3% of the rural women also strongly disagreed to the statement that the outcome of abortion done in a health facility by trained provider and by traditional practitioners is the same. Half of the respondents strongly disagreed that unnamed medical abortion pills procured from chemist are safe (51.9%) and self-administered medical abortion is safe (51.3%).

Relationship between knowledge, attitude of unsafe abortion practices and the background characteristics

81% had a favorable attitude towards unsafe abortion, while those in Aroko had the highest proportion of unfavorable attitude towards unsafe abortion (37.5%).

Table 1: Demographic characteristics of respondents

Variables	Categories	Frequency (%)
Age	15-19	53(17.1)
	20-24	43(13.9)
	25-29	64(20.7)
	30-34	44(14.2)
	≥35	
	Mean±S.D = 28.8±5.55	106(34.2)
Religion	Christianity	227(73.2)
	Islam	77(24.8)
	Traditional	6(2.0)
Marital Status	Single	74(23.9)
	Co-habiting	3(1.0)
	Married	228(73.6)
	Divorced	3(1.0)
	Separated	1(0.3)
	Widowed	1(0.3)
Family Type	Monogamy	297(95.8)
	Polygamy	13(4.2)
Educational qualification	No formal education	54(17.5)
	Some primary schooling	50(16.2)
	Completed primary school	19(5.8)
	Some secondary schooling	49(15.9)
	Completed secondary school	19(38.5)
	Tertiary education	19(6.2)
Occupation	Farming	79(25.5)
	Trading	117(37.7)
	Artisan	63(20.3)
	Civil servant	1(0.3)
	Student	50(16.1)
No of life births	0-3	266(85.8)
	≥4	44(14.2)

In conclusion, the study found that respondents' background characteristics such as education, employment status, and income class were associated with their attitude towards abortion. The result reveals that only 1.9% of respondents aged 15-19 had good knowledge of unsafe abortion, while 98.1% had poor knowledge (χ^2 = 0.001, p<0.001). In contrast, 26.6% of respondents aged 25-29 had good knowledge of unsafe abortion, while 73.4% had poor knowledge (χ^2 = 13.562, p<0.001). In terms of education, respondents with tertiary education had the highest proportion of good knowledge (21.1%), while those with no education had the lowest (1.0%) (χ^2 = 19.779, p<0.001). Similarly, respondents who were divorced had the highest proportion of good knowledge (33.3%), while those who were co-habiting had the lowest (0.0%) (χ^2 = 6.464, p=0.021). Respondents who have never been pregnant had the highest proportion of poor knowledge (98.6%) while none (0.0%) of respondents who reside in Aroko, Iyanfoworogi and Ogbaagba demonstrated good knowledge of unsafe abortion (p<0.001). The chi-square test results for each background characteristic including community of residence indicate that there is a significant association between the background characteristic and abortion knowledge.

The result also shows age that respondents aged between 25-29 years had the highest proportion of favorable attitude towards unsafe abortion (87.5%), while those aged 20-24 years had the highest proportion of unfavorable attitude towards unsafe abortion (25.6%). However, there was no statistically significant association between age and attitude towards unsafe abortion (p = 0.610). Respondents with no education had a significantly higher proportion of unfavorable attitude towards unsafe abortion (39.1%) compared to those with primary, secondary or tertiary education. Those with tertiary education had a 100% favorable attitude towards unsafe abortion. The chi-squared test showed a significant association between education and attitude towards unsafe abortion (p < 0.001). However, co-habiting respondents had the highest proportion of unfavorable attitude towards unsafe abortion (33.3%). The result shows that respondents who had ever been pregnant had a lower proportion of favorable attitude towards abortion (79.6%) compared to those who had never been pregnant (88.6%). However, the association between ever been pregnant and attitude towards unsafe abortion was not statistically significant (p = 0.088). There was no significant association between ever had an abortion and attitude towards unsafe abortion (p = 0.441). Respondents who had ever had an abortion had a slightly higher proportion of favorable attitude towards unsafe abortion (89.3%). Finally, there was a significant association between community of residence and attitude towards unsafe abortion (p < 0.001).

Logistic regression analysis showing relationship between poor knowledge and independent variables

The results show that age was significantly associated with poor knowledge of unsafe abortion, with women aged 25-29 years having the lowest odds of poor knowledge (OR=0.05, 95% CI=0.01-0.42, p=0.005) compared to women aged 15-19 years. Education was also significantly associated

Table 2: Proportion of respondents with knowledge of unsafe abortion

Variable	Category	No Freq. (%)	Yes Freq. (%)
Measure of Knowledge	Ever heard of the word reproductive health	74 (23.9)	236 (76.1)
Measure of Knowledge	Know issues that affect ability to have satisfying and safe sex life	135 (43.6)	175 (56.5)
Issues that affect reproductive health of women and girls	Ability to negotiate condom use	232 (74.8)	78 (25.2)
	Ability to access contraception	129 (41.6)	181 (58.4)
	Unintended pregnancy	218 (70.3)	92 (29.7)
	Unsafe abortion	117 (37.7)	193 (62.3)
	Sexually transmitted disease	260 (83.9)	50 (16.1)
	Breast cancer	300 (96.8)	10 (3.2)
Meaning of unsafe abortion	Pregnancy that does not end in life birth	268 (86.5)	42 (13.6)
	Induced abortion within the first three months of gestation	53 (17.1)	257 (82.9)
	Induced abortion within the first six months of gestation	257 (82.9)	53 (17.1)
	Pregnancy that threatens to, or ends on its own	228 (73.6)	82 (26.5)
Sources of information about unsafe abortion	Toll free	310 (100.0)	0 (0.0)
	Friends	186 (60.0)	124 (40.0)
	Internet	289 (93.2)	21 (6.8)
	Community health worker	206 (66.5)	104 (33.6)
	Chemist	229 (73.9)	81 (26.1)
	Neighbourhood nurse	183 (59.0)	127 (41.0)
	Health influencer	279 (90.0)	31 (10.0)
	Social media	301 (97.1)	9 (2.9)
	Newspaper, posters, leaflet	286 (92.3)	24 (7.7)
Procedure through which unsafe abortion can be procured	D&C	191 (61.6)	119 (38.4)
	Use of misoprostol based on prescription	119 (38.4)	191 (61.6)
	Use of concoctions and home remedies	142 (45.8)	168 (54.2)
	Inserting object to the vagina	283 (91.3)	27 (8.7)
	Surgical procedure	217 (70.0)	93 (30.0)
	Vigorous sexual episode	284 (91.6)	26 (8.4)
	Combination of misoprostol and mifepristone based on prescription	278 (89.7)	32 (10.3)
	Self-administration	246 (79.4)	64 (20.7)

with poor knowledge of unsafe abortion, with women who had secondary (OR=0.05, 95% CI=0.01-0.39, p=0.004) and tertiary education (OR=0.04, 95% CI=0.00-0.35, p=0.004) having lower odds of poor knowledge compared to those with no education. Marital status was also significantly associated with poor knowledge of unsafe abortion, with divorced women having lower odds of poor knowledge (OR=0.06, 95% CI=0.00-0.90, p=0.042) compared to single women. Women who had ever been pregnant had significantly lower odds of poor knowledge (OR=0.06, 95% CI=0.00-0.90, p=0.042) compared to those who had never been pregnant. In addition, the community of residence was significantly associated with poor knowledge of unsafe abortion, with women living in Erefe (OR=0.04, 95% CI=0.01-0.18, p<0.001) and Okerenbete (OR=0.12, 95% CI=0.02-0.65, p=0.014) having lower odds of poor knowledge compared to women living in Abata-egba. Overall, the findings suggest that age, education, marital status, ever been pregnant and community of residence were significant predictors of poor knowledge of unsafe abortion among rural women in Ile-Ife, Osun State, Nigeria.

The result show that education level was significantly associated with attitudes towards unsafe abortion, with women who had secondary

Table 3: Proportion of respondents with attitude and belief towards unsafe abortion

Statements	SA Freq. (%)	A Freq. (%)	D Freq. (%)	SD Freq. (%)
Every woman and girl have the right to decide if, when to have children, and how many	36 (11.6)	74 (23.9)	94 (30.3)	106 (34.2)
It is the choice of the pregnant woman to keep or abort her pregnancy with the guidance of the clinician	36 (11.6)	72 (23.2)	100 (32.3)	102 (32.9)
Abortion is safe if performed by a trained healthcare provider using the medical or surgical procedure	18 (5.8)	138 (44.5)	92 (29.7)	62 (20.0)
Abortion is an easier way to prove a woman's fertility	-	8 (2.58)	110 (35.5)	192 (61.9)
I will support my sister, or friend, to seek information about safe abortion	4 (1.3)	38 (12.3)	153 (49.4)	115 (37.1)
I will support my sister, or friend, to access safe abortion if it will be provided safely	2 (0.7)	27 (8.7)	171 (55.2)	110 (35.5)
I will recommend abortion if it is the result of rape or incest	27 (8.7)	90 (29.0)	109 (35.2)	84 (27.1)
Abortion should not be restricted in Nigeria to prevent deaths due to abortion	5 (1.6)	45 (14.5)	174 (56.1)	86 (27.7)
Unnamed medical abortion pills procured from chemist are safe	-	7 (2.3)	142 (45.8)	161 (51.9)
Self-administered medical abortion is safe	1 (0.3)	8 (2.6)	142 (45.8)	159 (51.3)
The outcome of abortion done in a health facility by trained provider and by traditional practitioners is the same	-	7 (2.3)	116 (37.4)	187 (60.3)
To abort is better than to use contraceptive	2 (0.7)	13 (4.2)	166 (53.6)	129 (41.6)

Table 4: Percentage distribution of respondents according to knowledge and attitude of unsafe abortion by background characteristics

Background Characteristics	Good Knowledge % (n)	Poor Knowledge % (n)	χ^2 (unsafe abortion knowledge)
Total	9.0 (28)	91 (282)	
Age			**p-value**
15-19	1.9 (1)	98.1 (52)	
20-24	4.7 (2)	95.4 (41)	
25-29	26.6 (17)	73.4 (47)	
30-34	6.8 (3)	93.2 (41)	< 0.001[f]
35-39	9.8 (4)	90.2 (37)	
40-44	2.4 (1)	97.6 (40)	
45-49	0.0 (0)	100 (24)	
Education			
None	1.0 (1)	99.1 (104)	
Primary	6.0 (4)	94.0 (63)	
Secondary	16.0 (19)	84.0 (100)	< 0.001
Tertiary	21.1 (4)	79.0 (15)	
Marital Status			
Single	2.7 (2)	97.3 (72)	
Co-habiting	0.0 (0)	100 (3)	
Married	10.5 (24)	89.5 (204)	
Divorced	33.3 (1)	66.7 (2)	0.021[f]
Separated	100 (1)	0.0 (0)	
Widowed	0.0 (0)	100 (1)	
Income Class			
Poor Income	4.0 (3)	96.1 (73)	
Lower Class Income	11.6 (25)	88.4 (191)	0.063[f]
Middle Class Income	0.0 (0)	100 (18)	
Live Birth			

None	3.5 (2)	96.6 (56)	
One	10.2 (5)	89.8 (44)	
Two	15.8 (12)	84.2 (64)	0.072
Three	4.8 (4)	95.2 (79)	
Four and above	11.4 (5)	88.6 (39)	
Ever Been Pregnant			
No	1.4 (1)	98.6 (69)	
Yes	11.3 (27)	88.8 (213)	0.008[f]
Ever Had Abortion			
No	8.2 (23)	91.8 (259)	
Yes	17.9 (5)	82.1 (23)	0.088
Community of Residence			
Abata-egba	2.7 (2)	97.3 (72)	
Aroko	0.0 (0)	100 (16)	
Ayekoka	6.1 (2)	93.9 (31)	
Erefe	42.2 (19)	57.8 (26)	
Iyanfoworogi	0.0 (0)	100 (40)	< 0.001[f]
Ogbaagba	0.0 (0)	100 (76)	
Okerenbete	19.2 (5)	80.8 (21)	

Background Characteristics	**Favourable attitude % (n)**	**Unfavourable attitude % (n)**	**χ^2 (Attitude towards unsafe abortion)**
Total	81.6 (253)	18.4 (57)	p-value
Age	83.0 (44)	17.0 (9)	
15-19			0.610
20-24	74.4(32)	25.6(11)	
25-29	87.5(56)	12.5(8)	
30-34	81.8(36)	18.2(8)	
35-39	75.6(31)	24.4(10)	
40-44	85.4(35)	14.6(6)	
45-49	79.2(19)	20.8(5)	
Education			
None	61.0 (64)	39.1 (41)	< 0.001
Primary	88.1 (59)	11.9 (8)	
Secondary	93.3 (111)	6.7 (8)	
Tertiary	100 (19)	0.0 (0)	
Marital Status			
Single	85.1 (63)	14.9 (11)	0.314[f]
Co-habiting	66.7 (2)	33.3 (1)	
Married	80.7 (184)	19.3 (44)	
Divorced	100 (3)	0.0 (0)	
Separated	100 (1)	0.0 (0)	
Widowed	0.0 (0)	100 (1)	
Income Class			
Poor Income	88.2 (67)	11.8 (9)	0.015
Lower Class Income	77.8 (168)	22.2 (48)	
Middle Class Income	100 (18)	0.0 (0)	
Live Birth			
None	86.2 (50)	13.8 (8)	0.613
One	79.6 (39)	20.4 (10)	
Two	76.3 (58)	23.7 (18)	
Three	83.1 (69)	16.9 (14)	

Four and above	84.1 (37)	15.9 (7)	
Ever Been Pregnant			
No	88.6 (62)	11.4 (8)	0.088
Yes	79.6 (191)	20.4 (49)	
Ever Had Abortion			
No	80.9 (228)	19.2 (54)	0.441
Yes	89.3 (25)	10.7 (3)	
Community of Residence			
Abata-egba	79.7 (59)	20.3 (15)	< 0.001f
Aroko	62.5 (10)	37.5 (6)	
Ayekoka	87.9 (29)	12.1 (4)	
Erefe	91.1 (41)	8.9 (4)	
Iyanfoworogi	97.5 (39)	2.5 (1)	
Ogbaagba	64.5 (49)	35.5 (27)	
Okerenbete	100 (26)	0.0 (0)	

education having significantly lower odds of unfavorable attitudes towards abortion (aOR = 0.11, 95% CI = 0.03-0.46, p = 0.003) compared to those with no education. Women who practiced Islam had significantly lower odds of unfavorable attitudes towards unsafe abortion (aOR = 0.35, 95% CI = 0.14-0.86, p = 0.022) compared to those who practiced Christianity. Women who had ever been pregnant had significantly higher odds of unfavorable attitudes towards unsafe abortion (aOR = 8.78, 95% CI = 1.12-68.55, p = 0.038) compared to those who had never been pregnant. Women who had ever had an abortion had lower odds of unfavorable attitudes towards unsafe abortion, but the association was not statistically significant at the 10% level (aOR = 0.2, 95% CI = 0.04-1.09, p = 0.063). In conclusion, the study found that education level, religion, and ever been pregnant were significant determinants of unfavorable attitudes towards unsafe abortion among rural women in Ile-Ife, Osun State, Nigeria.

Discussion

Unsafe abortion is widespread and medical attention regarding abortion is increasing day by day because of maternal mortality and morbidity. In this present study, the major source of information about unsafe abortion is from the neighbourhood nurse (41%). Neighbourhood nurse to a rural woman may be anybody wearing white gown who do not attend medical school but acquire the knowledge of caring for patients from a/an (un)skilled medical personnel. Farming communities may be experiencing higher rates of morbidity due to unsafe abortion because of their inadequate health facilities and lack of enough skilled medical personnel. This is in contract with conducted in southwest Ethiopia[12]. Among those who had heard of abortion the majority 82.9% knew unsafe abortion is an induced abortion within the first three months of gestation and majority (61.6%) believed that the use of misoprostol based on prescription is the best procedure to procure an abortion.

The results of this study shows that majority (81.6%) had a favourable attitude to unsafe abortion, this is in contrast with a similar study where 74.1% had negative attitude[13]. This difference may be due to the difference in the age of the participants since these studies were conducted only in the students and also due to the differences in accessing health information.

This study reveals that about a third (28.6%) of the respondents had their first abortion between 20-24 years of age., this is in agreement with a similar study done in fishing communities in Uganda[14], this may be due to the fact that women in farming communities tend to experience an early sexual debut which exposes them to pregnancies early in life before they are economically able to manage them, so, many of these pregnancies will most likely end in abortion. This highlights the primary care physician's need to improve Family Planning service provision in farming communities.

In this study education was found to be significant with the dependent variables with tertiary education having the highest proportion of good knowledge (21.1%), while those with no education had the lowest (1.0%) (χ^2 = 19.779, p<0.001). Respondents with no education had a significantly higher proportion of unfavorable attitude towards unsafe abortion (39.1%) compared to those with primary, secondary or tertiary education. Those with tertiary education had a 100%

Table 5: Logistic regression model of poor knowledge and unfavourable attitude of unsafe abortion among rural women in Ile-Ife and independent variables

Background Characteristics	OR (95% C.I)	P-value
Age		
15-19	1.00	
20-24	0.39 (0.04-4.50)	0.454
25-29	0.05 (0.01-0.42)***	0.005
30-34	0.26 (0.03-2.62)	0.255
35-39	0.18 (0.02-1.66)	0.129
40-44	0.77 (0.05-12.68)	0.854
45-49	-	-
Education		
None	1.00	
Primary	0.15 (0.02-1.39)*	0.095
Secondary	0.05 (0.01-0.39)***	0.004
Tertiary	0.04 (0.00-0.35)***	0.004
Marital Status		
Single	1.00	
Co-habiting	-	-
Married	0.24 (0.05-1.02)*	0.054
Divorced	0.06 (0.00-0.90)**	0.042
Separated	-	-
Widowed	-	-
Income Class		
Poor Income	1.00	
Lower Class Income	0.31 (0.09-1.07)*	0.064
Middle Class Income	-	-
Live Birth		
None	1.00	
One	0.31 (0.06-1.7)	0.179
Two	0.19 (0.04-0.89)**	0.035
Three	0.71 (0.13-3.99)	0.693
Four and above	0.28 (0.05-1.51)	0.138
Ever Been Pregnant		
No	1.00	
Yes	0.11 (0.02-0.86)**	0.035
Ever Had Abortion		
No	1.00	
Yes	0.41 (0.14-1.18)*	0.097
Community of Residence		
Abata-egba	1.00	
Aroko	-	-
Ayekoka	0.43 (0.06-3.20)	0.41
Erefe	0.04 (0.01-0.18)***	< 0.001
Iyanfoworogi	-	-
Ogbaagba	-	-
Okerenbete	0.12 (0.02-0.65)**	0.014
Unfavourable attitude towards unsafe abortion		
Age		
15-19	1.00	
20-24	1.68 (0.62-4.53)	0.305
25-29	0.7 (0.25-1.96)	0.495
30-34	1.09 (0.38-3.1)	0.877
35-39	1.58 (0.57-4.33)	0.377
40-44	0.84 (0.27-2.58)	0.758
45-49	1.29 (0.38-4.35)	0.685
Education		
None	1.00	
Primary	0.21 (0.09-0.49)***	< 0.001
Secondary	0.11 (0.05-0.26)***	< 0.001
Tertiary	-	-
Marital Status		
Single	1.00	
Co-habiting	2.86 (0.24-34.35)	0.407
Married	1.37 (0.67-2.81)	0.392
Divorced	-	-
Separated	-	-
Widowed	-	-
Income Class		
Poor Income	1.00	
Lower Class Income	2.13 (0.99-4.58)*	0.054
Middle Class Income	-	-
Live Birth		
None	1.00	
One	1.60 (0.58-4.44)	0.365
Two	1.94 (0.78-4.84)	0.156
Three	1.27 (0.49-3.25)	0.621
Four and above	1.18 (0.39-3.55)	0.765
Ever Been Pregnant		
No	1.00	
Yes	1.99 (0.89-4.43)*	0.092
Ever Had Abortion		
No	1.00	
Yes	0.51 (0.15-1.74)	0.280
Community of Residence		
Abata-egba	1.00	
Aroko	2.36 (0.74-7.53)	0.147
Ayekoka	0.54 (0.17-1.78)	0.313
Erefe	0.38 (0.12-1.24)	0.109
Iyanfoworogi	0.10 (0.01-0.80)**	0.029
Ogbaagba	2.17 (1.04-4.53)**	0.039
Okerenbete	-	-

******Significant at 1%, **Significant at 5%, *Significant at 10%; OR: Odds ratio; CI: Confidence interval***

favorable attitude towards unsafe abortion., this is in agreement with a similar findings[16], the explanation for this might be that rural women who have different information regarding health problems of unsafe abortion, could have increased awareness related to major obstacles for their education and other health-related problems.

According to this study, rural women who found age group of 20-24 were 0.05 times more likely to have a poor knowledge of unsafe abortion than those in the other age brackets, this is in agreement with a similar study[17-18]. Women who had ever been pregnant were 8 times more likely to have an unfavourable attitudes towards abortion compared to those who had never been pregnant, this may be due to the fact that pregnancy experience could influence a woman's perspective on abortion, shaping her attitudes based on personal encounters with reproductive decisions.

Conclusion and recommendations

In conclusion, this study reveal that neighbourhood nurse (41%) and friends (40%) were the most reported sources of information on unsafe abortion. Education, age, marital status, income level and community of residence was found to be significant to poor knowledge of unsafe abortion.

To prevent unintended pregnancies and unsafe abortion thereby enhancing food security of the nation, there is need for more additional funding to be allocated to sexual and reproductive health services, with marginalized communities receiving priority for providing reproductive health care and sex education. The implementation of youth friendly and mobile Family Planning services could increase access to Family Planning among stigmatized youth. Addressing the reproductive health requirements of elderly women and raising their awareness about the dangers of abortion while allowing them to achieve their desired fertility is critical.

Limitations

Because the study depended on participants' self-report, there was the possibility of recall bias about abortion history. We were concerned about nonresponse and concealing of sensitive information in response to inquiries concerning one's sexual activities (particularly unlawful ones), which we intended to address with a bigger study sample size. The study team was also taught the proper way to ask sensitive questions. In the multivariable analysis, we attempted to account for potential confounders of known factors; however, it was evident that many factors varied across study community, and we may not have obtained data on all confounders. Further study utilizing qualitative data gathering methods is required to accurately analyze perceptions of hazardous abortions and attitudes about abortions is suggested.

Authors' contributions

AA and TA conceived the study, **AA and AT** collected the data; **AA, TA and AT** interpreted the results, participated in data analysis, and drafted the final manuscript. All the authors read and approved the final manuscript.

Conflicts of interest

There are no conflicts of interest.

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