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Determinants of intention to abort among married women in a metropolitan city in South-west, Nigeria

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Abstract

This cross-sectional study assessed prior, future, and overall intention to abort among 739 married women aged 15-49 years in Ibadan, South-west, Nigeria. Data were obtained using an interviewer-administered questionnaire, and analyzed using logistic regression model ($\alpha_{0.05}$). The women's mean age was 35.8±7.4 years. Overall, 15.8% women had prior intention, 16.9% had future intention, while 26.7% had overall intention to abort. Determinants of prior intention to abort included desire for more children, media access, wealth status, and woman's autonomy. The odds of prior intention to abort was highest among unemployed women (aOR=1.699, p=0.472), and those with low autonomy (aOR=1.675, p=0.019). Odds of future intention to abort was lower among women with good media access (aOR=0.603, p=0.032), but higher among those whose husbands had completed secondary education (aOR=1.995, p=0.034). Future intention to abort can be minimised if organisations implementing sexual and reproductive health programmes provide media literacy tools for women and promote men's education to increase their earnings. *(Afr J Reprod Health 2024; 28 [3s]: 80-92).*

Keywords: Intention to abort, autonomy, reproductive health, unwanted pregnancy, Nigeria

Résumé

Cette étude transversale a évalué l'intention d'avorter antérieure, future et globale chez 739 femmes mariées âgées de 15 à 49 ans à Ibadan, dans le sud-ouest du Nigeria. Les données ont été obtenues à l'aide d'un questionnaire administré par l'intervieweur et analysées à l'aide d'un modèle de régression logistique ($\alpha_{0,05}$). L'âge moyen des femmes était de 35.8 ± 7.4 ans. Dans l'ensemble, 15.8 % des femmes avaient une intention préalable, 16.9 % avaient une intention future, tandis que 26.7 % avaient une intention globale d'avorter. Les déterminants de l'intention antérieure d'avorter comprenaient le désir d'avoir plus d'enfants, l'accès aux médias, la situation financière et l'autonomie de la femme. La probabilité d'avoir déjà eu l'intention d'avorter était la plus élevée chez les femmes au chômage (aOR=1.699, p=0.472) et chez celles ayant une faible autonomie (aOR=1.675,=0.019). Les chances d'avoir une intention future d'avorter étaient plus faibles chez les femmes ayant un bon accès aux médias (aOR=0,603, p=0.032) et celles dont les maris avaient terminé leurs études secondaires (aOR=1.995, p=0.034). Les intentions futures d'avorter peuvent être minimisées si les organisations mettant en œuvre des programmes de santé sexuelle et reproductive fournissent des outils d'éducation aux médias pour les femmes et promeuvent l'éducation des hommes pour augmenter leurs revenus. *(Afr J Reprod Health 2024; 28 [3s]: 80-92).*

Mots-clés: Intention d'avorter, Autonomie, Santé reproductive, Grossesse non désirée, Nigeria

Introduction

Intention to terminate unwanted pregnancies is one of the drivers of abortion among married women, and abortion in marriage remains a public health issue with dire social and health consequences[1]. Results obtained from the 2018 abortion surveillance in the United States reported that the prevalence of abortion in marriage is 14.8%, and the abortion ratio among married women is 44 abortions per 1,000 live births[2]. A recent study based on the 1997–2017 China Fertility Surveys reported that 21% of induced abortions take place in marriage[3]. Annual abortion estimates in Kenya increased from 300,000 in 2004 to 445,000 in 2012[4]. A recent study reported that 14.2% of all abortions in Southwest Nigeria occur in marriage[1]. Thus, evidence exists that abortion is not only a

common practice among unmarried individuals, but also occurs in marriage among couples mainly based on socioeconomic or personal grounds[1,5].

A couple's pregnancy circumstances, priorities, and values are only a few of the many aspects that influence their decision-making to retain or abort a pregnancy[6-8]. Those choosing to have an abortion or to keep their pregnancy weigh these numerous factors, just like when they make other healthcare decisions[8]. While all women are likely to undergo abortion, there is evidence that abortion is more likely to occur among 51% of currently married women in Nigeria[9] Thus, concerted harm reduction strategies are urgently needed to address abortion among married women. These include investigating women's autonomy, the prevalence of unmet need for contraception, pregnancy intentions, and intention to abort. According to the recent demographic health survey, 12% of currently married women have an unmet need for child spacing while 7% have an unmet need for limiting childbearing[10]. Although there appears to be a drastic decline in the prevalence of unmet need for contraception in Nigeria between 2013 and 2018, the prevalence remains high[10,11]. The continued high prevalence not only increases the risk of unintended pregnancies, intention to abort, and exposure to unsafe abortion among married women but also delays the attainment of universal access to reproductive health services, an important agenda on the sustainable development goals.

Many studies have been conducted on abortion in Nigeria. A recent study focused on women's fears regarding abortion and the quality of care received from health providers[12], while Awoyemi and Nvignon focused on abortion-seeking behavior among the general population of women in Ibadan[13] thus, failing to report intention to abort and its determinants among married women only. Ojo *et al.*'s study conducted in Ife reported the prevalence of unintended pregnancy and abortion among married women[1]. However, the prevalence rates reported in these studies were not generalizable since they were conducted in a semi-urban setting only. In addition, social desirability bias could have influenced the reported prevalence of abortion among the study population. Conducting abortion prevalence studies in a country where abortion is illegal may result in spurious outcomes.

Intentions are behavioral plans that enable individuals to accomplish their behavioral goal[14]. It allows persons to take their time to deliberate on the phenomenon of interest critically by identifying and weigh its consequences before its uptake. A study on intention to abort is important to create awareness on the burden of married women with a high likelihood of this practice since changes in intention can affect the abortion practice. Provision of information on intention to abort will aid the policymakers to plan for an appropriate intervention.

Consequently, our focus in the current study was on prior and future intention to abort among married women. This study aimed to investigate the prevalence and determinants of intention to abort among married women in Ibadan, Oyo State, Nigeria.

Methods

Study area

This study was conducted in Ibadan, Oyo State, in the Southwestern part of Nigeria. Ibadan is located 128 kilometers northeast of Lagos, and 530 kilometers southwest of Abuja[15]. Population-wise, Ibadan is the third largest city in Nigeria in terms of geographical coverage[15]. Ibadan is made up of 11 Local Government Areas (LGAs) divided into urban, semi-urban, and rural areas. In 2022, the population of Ibadan was estimated at approximately 3.76 million out of the 218 million people living in Nigeria[16]. The primary inhabitants of Ibadan are members of the Yoruba ethnic group; however, the city is home to other diverse ethnic groups, including Ibo, Hausa, Edo, Ibibio, etc[15].

Study design

This was a descriptive cross-sectional study conducted among currently married women aged 15-49 years that have been married for at least one year and with at least one living child. Women that met the inclusion criteria who were married, but temporarily separated from their husbands at the time of data collection were excluded.

Sampling technique and study population

A three-stage sampling technique was utilized to select the eligible respondents from their

households. In the first stage, three LGAs were randomly selected from the 11 LGAs in Ibadan. The second stage involved the selection of five Enumeration Areas (EAs) randomly from each of the selected LGAs. Household listing of the qualified respondents was conducted across all the selected EAs, and this constituted the sampling frame for the study.

The sample size for the study was computed using the Leshlie Kish's formula for calculating sample size for cross-sectional studies

$n = \frac{Z^2_{(1-\alpha)}pq}{d^2}$

where:

n = minimum sample size

$Z_{(1-\alpha)}$ = standard normal deviation at 95% confidence interval (1.96)

p=0.142 (The prevalence of abortion in marriage in Southwest Nigeria was reported to be 14.2%[1]).

q=1-p= 1-0.142=0.858

d= 3.0%

minimum sample size = $\frac{1.96*1.96*0.142*0.858}{0.03^2}$ = 520.05

Assuming 10% non-response rate,

The estimated sample size for the study = $\frac{minimum\ sample\ size}{1-non\ response\ rate}$ = $\frac{520.05}{0.90}$ = 577.03

Upon factoring a design effect (because respondents were enrolled from their clusters) of 1.5.

The total sample size = 1.5 X 577 = 867 married women. Thereafter, respondents were selected from this frame using a systematic random sampling technique with a sampling interval of 4.

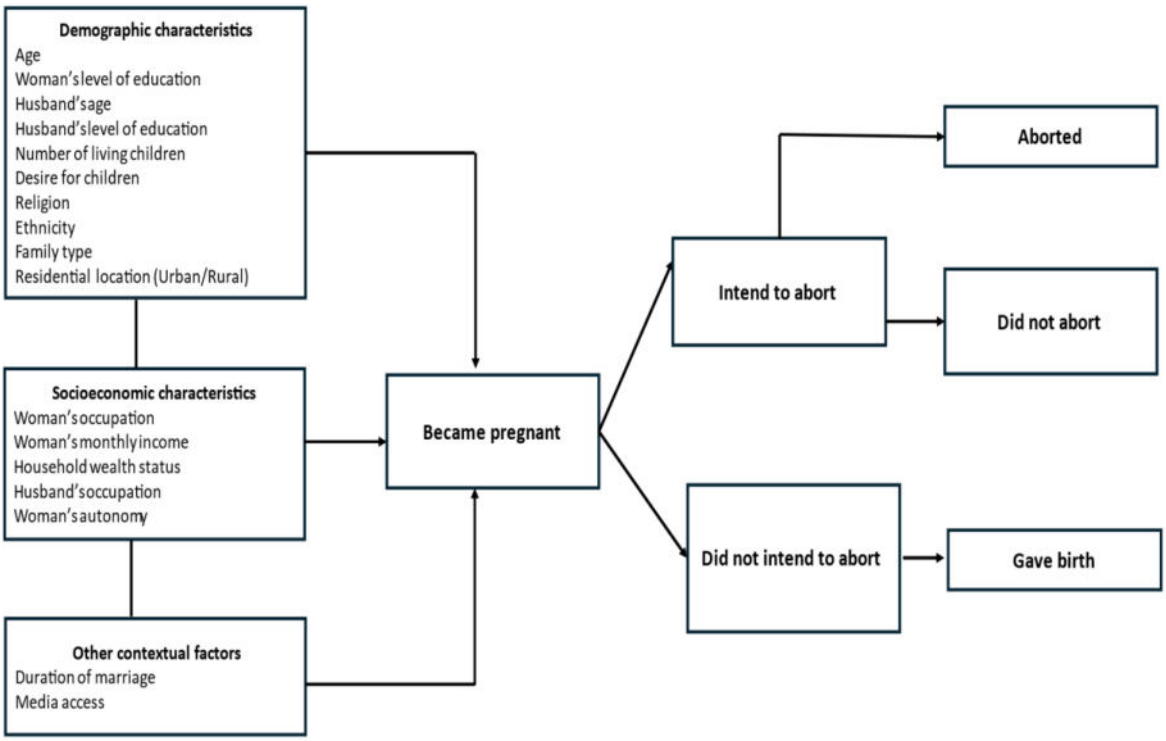
Study instruments and collection

An interviewer-administered questionnaire was used for data collection. The questionnaire was pretested among married women of reproductive age in Ibadan Southeast; an LGA with similar demographics to the study population, but not one of the actual study areas. After pretesting, ambiguous questions in the questionnaire were simplified before full-fledged data collection for the actual study. The questionnaire contained five sections, namely, sociodemographic characteristics, obstetric history, media access, autonomy, and intention to abort. The questionnaires were administered by trained research assistants.

Variable definition

The outcome variables were prior intention to abort, future intention to abort, and overall intention to abort. Prior intention to abort was measured as a positive response to the question "Have you ever considered having an abortion in this marriage?". Future intention to abort was defined as future consideration of abortion in the current marriage and was measured as a positive response to the question"Will you ever consider having an abortion in this marriage if the need arises?".Overall intention to abort was defined as both prior and future consideration of abortion in their current marriage. Responses were dichotomized into "1=Yes" and "2=No".

The independent variables included age, woman's level of completed education, husband's level of completed education, religion, ethnicity, occupation type, family type, monthly income, and household items. The list of household items was adopted from the 2018 NDHS dataset[16], and included details on electricity, radio, refrigerator, bicycle, motorcycle, car/truck, telephone, bank account, the main cooking fuel, main floor material of the house, main wall material of the house, and main roof material of the house. Similarly, questions on media access were obtained from the 2018 NDHS dataset[16] and included questions on the frequency of use of reading newspapers or magazines, listening to the radio, watching television, and the frequency of internet use. Woman's autonomy questions were also obtained from the 2018 NDHS dataset[16], and included 13 questions: The first section focused on women's decision-making ability on respondent's healthcare, large household purchases, household purchases for daily needs, visits to relatives, daily meals, how to spend respondents' earnings, husband's earnings, and expected number of children to be born; and response to each question was graded from "1 = respondent alone; 2 = respondent and husband/partner; 3 = husband/partner alone; 4 = someone else; and 5 = other". The second section of the autonomy questions was centered on the justification of the husband beating the wife if she: goes out without notifying him, neglects the children, argues with him, refuses to have sex with him, burns food, and response options were "1=Yes; 2=No".



Conceptual framework for the study

Data analysis

Data were summarized using SPSS version 25.0[17]. Descriptive statistics were summarized using frequencies and percentages. Media access was categorized into "not at all, less than once a week, and at least once a week", which were re-categorized into "No=0" (not at all) and "Yes=1" (less than once a week and at least once a week). The mean media access score of "2.3" was used as the cut-off point to dichotomize respondents into "those with good media access" (>2), and "those with poor media access" (≤2). The socioeconomic status was developed using Principal Components Analysis (PCA) on SPSS[17]. The input to the PCA included the previously listed household items. A weight or factor score generated by PCA was assigned to each family asset for which data was obtained. The obtained asset scores were standardized against a normal distribution with mean value of zero and standard deviation value of one. The distribution cut points that determined the wealth tertiles were then established using these standardized scores. The tertiles were arranged as follows: Poor, middle, and rich. The responses to the autonomy questions were further recoded into "yes=1" for women whose response option was "1" and "2", while "no=0" was assigned to those whose response options were "3, 4, and 5". A new variable named "Women's autonomy in household decision-making" was created, and a composite score was then generated ranging from "0" to "13". A mean "women's autonomy in household decision-making" score of 11.3 was generated and was used to dichotomize respondents; those with scores <10 were categorized to have "low autonomy", those with scores between 10-11 were categorized as having "Medium autonomy", while those with scores between 12-13 were said to have "High autonomy".

Prior and future intention to abort were independently recoded so that "1=Yes", and

"0=No". Both prior and future intention to abort were computed, and a new variable named "Overall intention to abort" was generated. Women with mean overall intention to abort scores >1 were said to have overall intention to abort. Inferential statistics were computed using Chi-square tests, and binary logistic regression analyses were conducted to determine the predictors of intention to abort among the respondents. The levels of statistical significance were set at $p < 0.05$.

Ethics approval and consent to participate

Ethical approval for this study was obtained from the Oyo State Ministry of Health Research Ethics Committee (Ref: AD/13/1450/5299[A]). Verbal informed consent was obtained from each participant before each interview was conducted. Respondents were not exposed to any known harm because they participated in this research.

Results

Overall, 739 married women responded to the survey, thus yeding 85.2% response rate. The mean age of the women and children ever born was 35.8±7.4 years and 2.8±1.3 respectively. In all, 266 (36.0%) women were aged 25-34 years, and 117 (15.8%) were 45 years and above. Also, 193 (26.1%) women had been married for 5-9 years, and 406 (54.9%) had been married for at least 10 years (Table 1).

Table 1: Sociodemographic characteristics of married women from selected communities in Ibadan, Nigeria

Background characteristics	Frequency	%
Age (Years)		
≤24	48	6.5
25-34	266	36.0
35-44	308	41.7
≥45	117	15.8
Marital duration (Years)		
0-4	140	18.9
5-9	193	26.1
≥10	406	54.9
Family type		
Monogamy	398	53.9
Polygyny	341	46.1
Location		
Urban	476	64.4
Rural	263	35.6
Woman's highest level of education		
≤Primary	109	14.7
Secondary	464	62.8
Tertiary	166	22.5
Religion		
Christianity	456	61.7
Islam	283	38.3
Ethnicity		
Yoruba	669	90.5
Others	70	9.5
Woman's occupation type		
Unemployed	111	15.0
Unskilled	46	6.2
Skilled	159	21,5
Professional/Technical/Managerial	270	36.5
Clerical	111	15.0
Monthly income		
<30,000	409	55.3
≥30,000	330	44.7
Wealth status		
Poor	263	35.6
Middle	245	33.2
Rich	231	31.3
Number of living children		
≤2	324	43.8
>2	415	56.2
Media access		
Good	400	54.1
Poor	339	45.9
Woman's autonomy		
High	391	52.9
Medium	254	34.4
Low	94	12.7
Woman's desire for children		
Husband wants more	116	15.7
Husband wants fewer	31	4.2
Couple wants same	592	80.1
Husband's age (Years)		
<35	186	25.2
35-44	436	59.0
≥45	117	15.8
Husband's highest level of education		
≤Primary	107	14.5
Secondary	418	56.6
Tertiary	214	29.0
Husband's employment status		
Working	713	96.5
Not working	26	3.5

In all, 117 (15.8%) women had prior intention to abort, 125 (16.9%) had future intention to abort, and 197 (26.7%) women had overall intention to abort (Figure 1). Out of the 117 women with prior intention to abort, 18 (15.4%) had procured an abortion. Overall, 9 (18.8%) married women aged 24 years and below have had a prior intention to abort compared to 30 (11.3%) aged 25-34 years, 50 (16.2%) aged 35-44 years, and 28 (23.9%) aged 45 years and above (χ^2= 10.24, p=0.017). Also, 7 (14.6%) married women aged 24 years and below have had a prior intention to abort compared to 42

Table 2: Association between intention to abort and sociodemographic characteristics of the married women

Background characteristics	Prior Intention Yes % (n)	χ2 (p-value)	Future Intention Yes % (n)	χ2 (p-value)	Overall Intention Yes % (n)	χ2 (p-value)
Total	**15.8 (117)**		**16.9 (125)**		**26.7 (197)**	
Age (Years)						
≤24	18.8 (9)	10.24	14.6 (7)	1.02	27.1 (13)	5.16 (0.104)
25-34	11.3 (30)	(**0.017**)	15.8 (42)	(0.797)	22.2 (59)	
35-44	16.2 (50)		18.5 (57)		28.2 (87)	
≥45	23.9 (28)		16.2 (19)		32.5 (38)	
Marital duration (Years)						
0-4	13.6 (19)	12.85	15.0 (21)	2.10	24.3 (34)	8.74 (**0.040**)
5-9	8.8 (17)	(**0.002**)	14.5 (28)	(0.350)	19.7 (38)	
≥10	20.0 (81)		18.7 (76)		30.8 (125)	
Family type						
Monogamy	16.8 (67)	0.65	12.1 (48)	14.46	21.1 (84)	13.60
Polygamy	14.7 (50)	(0.420)	22.6 (77)	(**<0.001**)	33.1 (113)	(**<0.001**)
Location						
Urban	15.5 (74)	0.08	16.6 (79)	0.10	26.5 (126)	0.02 (0.599)
Rural	16.3 (43)	(0.774)	17.5 (46)	(0.756)	27.0 (71)	
Woman's highest level of education						
≤Primary	27.5 (30)	14.60	20.2 (22)	2.51	34.9 (38)	7.01 (**0.044**)
Secondary	14.9 (69)	(**0.001**)	17.5 (81)	(0.285)	26.9 (125)	
Tertiary	10.8 (18)		13.3 (22)		20.5 (34)	
Religion						
Christianity	16.0 (73)	0.03	18.4 (84)	1.92	27.9 (127)	0.87 (0.656)
Islam	15.5 (44)	(0.867)	14.5 (41)	(0.166)	24.7 (70)	
Ethnicity						
Yoruba	15.7 (102)	1.82 (0.178)	16.1 (108)	2.99 (0.084)	26.3 (176)	0.44 (0.159)
Others	21.4 (15)				30.0 (21)	
Woman's occupation type						
Unemployed	28.3 (13)	14.48	21.7 (10)	8.20	39.1 (18)	5.49 (0.484)
Unskilled	11.3 (18)	(**0.006**)	20.1 (32)	(0.085)	25.2 (40)	
Skilled	15.6 (42)		13.0 (35)		23.7 (64)	
Professional/ Technical/Managerial	11.8 (18)		21.6 (33)		28.8 (44)	
Clerical	23.4 (26)		13.5 (15)		27.9 (31)	
Monthly income						
<30,000	11.7 (48)	11.53	11.0 (45)	22.78	19.6 (80)	23.60
≥30,000	20.9 (69)	(**0.001**)	24.2 (80)	(**<0.001**)	35.5 (117)	(**<0.001**)
Wealth status						
Poor	17.5 (46)	0.86	22.1 (58)	7.81	34.2 (90)	12.0 (**<0.001**)
Middle	15.1 (37)	(0.652)	14.7 (36)	(**0.020**)	22.9 (56)	
Rich	14.7 (34)		13.4 (31)		22.1 (51)	
Number of living children						
≤2	11.4 (37)	8.43	14.2 (46)	3.03	21.0 (68)	9.49 (**0.003**)
>2	19.3 (80)	(**0.004**)	19.0 (79)	(0.082)	31.1 (129)	
Media access						
Good	12.8 (51)	6.22	11.5 (46)	18.19	18.3 (73)	31.50
Poor	19.5 (66)	(**0.013**)	23.3 (79)	(**<0.001**)	36.6 (124)	(**<0.001**)
Woman's autonomy						
High	36 (9.2)	32.89	82 (21.0)	11.72	26.3 (103)	2.40 (0.859)
Medium	52 (20.5)	(**<0.001**)	27 (10.6)	(**0.003**)	24.8 (63)	
Low	29 (30.9)		16 (17.0)		33.0 (31)	

Woman's desire for children						
Husband wants more	27.6 (32)	16.22	15.5 (18)	0.62	32.8 (38)	2.60 (0.854)
Husband wants fewer	22.6 (7)	(**<0.001**)	12.9 (4)	(0.735)	25.8 (8)	
Couple want same	13.2 (78)		17.4 (103)		25.5 (151)	
Husband's age						
≤24	11.8 (2)	0.970[a]	1 (5.9)	7.658	0.0 (0)	3.50 (0.629)
25-34	15.4 (26)	(0.817)	13.6 (23)	(**0.048**)	23.2 (43)	
35-44	17.9 (78)		14.9 (65)		26.6 (116)	
≥45	16.2 (19)		23.9 (28)		32.5 (38)	
Husband's highest level of education						
≤Primary	14.0 (15)	3.32	16.8 (18)	8.80	24.3 (26)	10.70
Secondary	17.9 (75)	(0.190)	20.1 (84)	(**0.012**)	31.1 (130)	(<**0.001**)
Tertiary	12.6 (27)		10.7 (23)		19.2 (41)	
Husband's employment status						
Working	16.0 (144)	0.11 (0.541)	16.7 (119)	0.35 (0.393)	26.5 (189)	0.23 (0.149)
Not working	11.5 (3)		23.1 (6)		30.8 (8)	

(15.8%) aged 25-34 years, 57 (18.5%) aged 35-44 years, and 19 (16.2%) aged 45 years and above (χ^2= 1.02, p=0.797) (Table 2).

Table 3 shows the unadjusted logistic model of intention to abort among married women in Ibadan, Oyo State. Compared to the odds of intention to abort among married women aged 24 years and below, those aged 25-34 years had twice higher odds (OR=2.198, 95%CI=0.360-13.414, p=0.394), women aged 35-44 years had 30% higher odds (OR=1.299, 95%CI=0.143-11.799, p=0.816), and those aged 45 years and above had 74% less odds (OR=0.736, 95%CI=0.063-8.676, p=0.808). Married women in polygamous families had approximately two times higher odds to have future intention (OR=1.629, 95%CI=1.030-2.576, p=0.037) and overall intention (OR=1.629, OR=1.056-2.512, p=0.027) to abort compared to those in monogamous families.

Table 4 describes the actual determinants of prior, future, and overall intention to abort. Compared to women with high autonomy, those with medium autonomy and low autonomy had 30% (aOR=1.304, 95%CI=0.725-2.345, p=0.376) and two times higher odds (aOR=1.675, 95%CI=1.088-2.576, p=0.019) respectively to have prior intention to abort. Compared to women with poor media access, those with good media access had 40% fewer odds to have future intention to abort (aOR=0.603, 95%CI=0.3820.957, p=0.032), and 60% fewer odds of overall intention to abort (aOR=0.574, 95%CI=0.370-0.889, p=0.013).

Discussion

Findings from this study revealed that a large proportion of married women have intention to abort, thus highlighting the likelihood of prior or future intention to abort among them. Contrary to the widely accepted social belief in many Nigerian societies that all pregnancies occurring in marriage should be expected as a dividend of the marital union[18,19], the results obtained from this study posit that marriage provides zero immunity from intention to abort. We observed an interesting trend in intention to abort across the three periods considered, with prior intention to abort (15.8%) ranking lower than future intention (16.9%) and overall intention to abort among married women (26.7%). This shows that future intention to abort poses a high influence on women's intention to abort. Although data on abortion and intention to abort have not been reported in the NDHS over the years[10,11], the high prevalence of unmet need for contraceptive use and poor sexual negotiation skills (among women) reported in the NDHS[10] are likely to promote unintended pregnancies and intention to abort. Thus, married women need to be equipped with sufficient contraceptive education and sexual negotiation skills to prevent unwanted, (mistimed or unplanned pregnancies) and intention to abort.

The predictors of prior intention to abort were ethnicity and medium/low autonomy. Because of their partial or total dependence on their husbands, married women with medium or low

Table 3: Unadjusted logistic regression model of intention to abort among married women in Ibadan, Oyo State

Background characteristics	Previous intention uOR (95%CI)	p-value	Future intention uOR (95%CI)	p-value	Overall intention uOR (95%CI)	p-value
Age (Years)						
≤24	1					
25-34	2.198 (0.360-13.414)	0.394	1.061 (0.373-3.020)	0.912	1.083 (0.416-2.822)	0.870
35-44	1.299 (0.143-11.799)	0.816	0.902 (0.263-3.095)	0.870	0.864 (0.275-2.312)	0.802
≥45	0.736 (0.063-8.676)	0.808	0.674 (0.179-2.531)	0.559	0.671 (0.195-2.307)	0.526
Marital duration (Years)						
0-4	1.004 (0.206-4.893)	0.996	1.093 (0.429-2.783)	0.852	1.208 (0.500-2.916)	0.674
5-9	0.671 (0.185-2.438)	0.545	0.868 (0.428-1.758)	0.694	0.904 (0.462-1.768)	0.767
≥10	1		1		1	
Family type						
Monogamy	1		1		1	
Polygamy	0.892 (0.382-2.083)	0.793	1.629 (1.030-2.576)	**0.037**	1.629 (1.056-2.512)	**0.027**
Location						
Urban	0.681 (0.296-1.564)	0.365	1.110 (0.707-1.743)	0.651	1.018 (0.663-1.561)	0.936
Rural	1		1			
Woman's highest level of education						
At most primary	0.859 (0.261-2.820)	0.802	1.036 (0.557-1.927)	0.911	1.082 (0.596-1.962)	0.796
Secondary	0.804 (0.180-3.599)	0.776	0.888 (0.376-2.095)	0.786	0.885 (0.391-2.005)	0.769
Tertiary	1		1		1	
Religion						
Christianity	0.791 (0.281-2.228)	0.657	1.353 (0.783-2.337)	0.279	1.144 (0.683-1.918)	0.610
Islam	1		1		1	
Ethnicity						
Yoruba	0.228 (0.066-0.780)	**0.018**	0.628(0.301-1.308)	0.214	0.606 (0.298-1.231)	0.606
Others	1		1		1	
Woman's occupation type						
Unemployed	1.699 (0.400-7.216)	0.472	2.231 (0.744-6.691)	0.152	2.330 (0.861-6.308)	**0.096**
Unskilled manual	0.286 (0.069-1.177)	**0.083**	1.325 (0.589-2.981)	0.497	1.053 (0.490-2.265)	0.895
Skilled manual	0.289 (0.084-1.001)	**0.050**	1.052 (0.498-2.226)	0.894	0.860 (0.425-1.738)	0.674

Professional/Technical/Managerial	0.412 (0.110-1.545)	0.189	1.534 (0.742-3.171)	0.248	1.279 (0.644-2.539)	0.483
Clerical	1		1		1	
Monthly income						
<30,000	1.054 (0.453-2.453)	0.903	0.345 (0.216-0.550)	**<0.001**	0.447 (0.289-0.691)	**<0.001**
≥30,000	1		1		1	
Wealth status						
Poor	0.427 (0.161-1.134)	**0.088**	0.914 (0.540-1.548)	0.738	0.758 (0.460-1.252)	0.279
Middle	0.451 (0.167-1.220)	0.117	0.860 (0.504-1.467)	0.540	0.704 (0.424-1.168)	0.174
Rich	1		1		1	
Number of living children						
≤2	0.895 (0.347-2.520)	0.936	0.843 (0.493-1.440)	0.532	0.773 (0.463-1.291)	0.325
>2	1				1	
Media access						
Good	0.950 (0.396-2.279)	0.908	0.603 (0.380-0.957)	**0.032**	0.574 (0.370-0.889)	**0.013**
Poor	1		1		1	
Woman's autonomy						
High	1		1		1	
Medium	1.797 (1.043-3.098)	**0.035**	0.879 (0.455-1.697)	0.701	1.110 (0.587-2.099)	0.749
Low	4.344 (2.458-7.677)	**<0.001**	0.641 (0.377-1.090)	0.101	1.187 (0.732-1.926)	0.488
Woman's desire for children						
Husband wants more	1.507 (0.560-4.053)	0.417	1.051 (0.548-2.016)	0.882	0.929 (0.498-1.731)	0.816
Husband wants fewer	2.128 (0.504-8.980)	0.304	0.909 (0.288-2.868)	0.871	0.875 (0.306-2.503)	0.803
Both couples want same	1		1		1	
Husband's highest level of education						
At most primary	0.388 (0.069-2.182)	0.283	1.159 (0.475-2.868)	0.745	0.807 (0.343-1.899)	0.623
Secondary	0.921 (0.334-2.540)	0.874	1.995 (1.053-3.782)	**0.034**	1.658 (0.917-2.998)	0.095
Tertiary	1		1		1	
Husband's employment status						
Working	1.956 (0.169-22.639)	0.591	0.493 (0.136-1.794)	0.283	0.486 (0.146-1.617)	0.239
Not working	1		1		1	

Table 4: Adjusted logistic regression model showing the true determinants of intention to abort among married women in Ibadan, Oyo State

Background characteristics	Prior intention uOR (95%CI)	p-value	Future intention uOR (95%CI)	p-value	Overall intention uOR (95%CI)	p-value
Family type						
Monogamy			1		1	
Polygamy			1.629 (1.030-2.576)	**0.037**	1.629 (1.056-2.512)	**0.027**
Ethnicity						
Yoruba	0.228 (0.066-0.780)	**0.018**				
Others	1					
Woman's occupation type						
Unemployed	1.699 (0.400-7.216)	0.472				
Unskilled manual	0.286 (0.069-1.177)	**0.083**				
Skilled manual	0.289 (0.084-1.001)	**0.050**				
Professional/Technical/Managerial	0.412 (0.110-1.545)	0.189				
Clerical	1		1		1	
Monthly income (Naira)						
<30,000 (<$40.54)			0.345 (0.216-0.550)	**<0.001**	0.447 (0.289-0.691)	**<0.001**
≥30,000 (≥40.54)			1		1	
Wealth status						
Poor	0.427 (0.161-1.134)	**0.088**				
Middle	0.451 (0.167-1.220)	0.117				
Rich	1					
Media access						
Good	0.950 (0.396-2.279)	0.908	0.603 (0.380-0.957)	**0.032**	0.574 (0.370-0.889)	**0.013**
Poor	1		1		1	
Woman's autonomy						
High	1					
Medium	1.304 (0.725-2.345)	0.376				
Low	1.675 (1.088-2.576)	**0.019**				
Husband's highest level of education						
At most primary	0.388 (0.069-2.182)	0.283	1.159 (0.475-2.868)	0.745	0.807 (0.343-1.899)	0.623
Secondary	0.921 (0.334-2.540)	0.874	1.995 (1.053-3.782)	**0.034**	1.658 (0.917-2.998)	0.095
Tertiary	1		1		1	

autonomy are less likely to negotiate contraceptive use[20,21]. As a result, these women had been exposed to unwanted pregnancy and are likely to have had prior intention to abort. Likewise, ethnicity has remained an important sociological marker in the sexual and reproductive health context in Nigeria, with the Yoruba ethnic group having less likelihood of prior intention to abort compared to other ethnic groups[20,21]. In their research, Adebowale[22] as well as and Mobolaji and colleagues[23] reported that ethnicity (South < North) wields a significant influence on early sexual initiation and early childbearing. Ethnic disparities in enrolling female children in formal education have been reported, and this has been linked to a high level of autonomy and decision-making abilities among Southern women[23]. Likewise, our findings corroborate literature that women who are employed are less likely to have gotten unwanted pregnancies[24,25] in the past, or to have had prior intention to abort. Therefore, improved health education, clear communication of pregnancy prevention tips in local languages, and women empowerment programs should be adopted to promote women's autonomy and reduce intention to abort.

This study found that family type (polygyny) is a determinant of both future and overall intention to abort. Polygyny is a complex family system that involves the sexual relationship between a man, the husband, and many wives. Polygamous households have distinct family problems, stemming from jealousy between the wives over household resources and extending to pre-assigned sexual rounds for each woman[26,27]. Due to the pressure inherent in many polygamous households as well as the inherent lack of autonomy to negotiate safe sex between each woman and the husband[27], married women in polygamous households get pregnant frrequently. Often, each woman in a polygamous household bears the responsibility of raising her children[28]. Therefore, the woman may consider an abortion, particularly if her income is not enough to cater for an 'additional mouth'. This study suggests that earning more than ₦30,000 ($40.54) monthly is a factor influencing the future and overall intention to abort among married women. The more a woman earns, the more she is likely to exert her reproductive health rights, and thus consider an abortion despite being married, be it in the future or overall[29].

From this study, we identified poor media access as a factor influencing overall intention to abort among married women. Media platforms have been employed as important channels of disseminating health information, including contraceptive use[30,31]. Thus, women with poor media access are likely to have poor health literacy in all aspects including decision-making on contraceptive use and pregnancy prevention. Given the sociocultural context of Nigeria, women are not expected to negotiate contraception with their husbands[32,33]. This is further evident in our research finding that there exists an increased likelihood of intention to abort among married women with medium and low autonomy compared to those with high. The husband's educational attainment is also likely to promote a woman's prior and overall intention to abort among married women. This could be because men wih lower levels of education are less likely to have sufficient knowledge of modern contraceptives[34]. Even though necessary contraceptive measures may not have been adopted by the woman in question, probably due to existing sociocultural and religious beliefs that pregnancy should not be prevented in marriage, abortion in marriage may be considered by the woman particularly if the desired number of children has been attained.

Limitations

This study was conducted in only one city in one of the States in Nigeria, thus the findings obtained herein may not be generalizable. Recall bias may have also led to an underreporting of prior intention to abort. Despite these limitations, this study is the first publicly available literature that provides crucial information on intention to abort, both prior and future.

Conclusion

Intention to abort is an important public health issue in Nigeria, particularly among married women who practiced polygyny, high-income earners, those with poor media access, those who lack autonomy in their households, and women whose husbands had low levels of educational attainment. To reduce the prevalence of intention

to abort, women's empowerment in decision-making (autonomy) should be scaled up. This could include the organization and set-up of married women in entrepreneurial and skills training activities by both governmental and non-governmental organizations. Policymakers should promote women's access to media by providing them with items such as radios, television sets, and android phones for internet connection. Engagement of opinion and religious groups in reproductive health information to women should be undertaken. Similarly, the education of the male folks should be enhanced to promote their income-earning capabilities, one of the important requirements of keeping a pregnancy.

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