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Research Article

Magnitude and Predictors of Unplanned Pregnancy among Married Women in Rwanda

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Abstract

Background: Unplanned pregnancy leads to ill health during pregnancy and perinatal complications. Despite this, there is limited research on the magnitude and predictors of unplanned pregnancy, especially among married women. This study, therefore, aims to determine the magnitude and predictors of unplanned pregnancy among married women in Rwanda.

Methodology: The descriptive cross-sectional study design was used. Interview-administrated structured questionnaire was used to collect data from 383 pregnant legally married women. They were selected using multistage sampling method. First 4 health centers out of 10 were selected using simple random sampling then pregnant women were selected randomly according to probability proportion to size. Approval to conduct the study was obtained from Mount Kenya university Ethical review committee. Data were analyzed through SPSS version 20; logistic regression analysis was performed to estimate predictors of unplanned pregnancy among married women.

Results: The prevalence of unplanned pregnancy was 30.8% and 72.9% of reported unplanned pregnancy was mistimed. In crude odd ratio, the findings showed that respondents who got married between 21-24 years* were four times more likely to experience unplanned pregnancy compared to those who married at the age of 25 years and more. Being married for more than 11 years was a significant predictor of unplanned pregnancy. In adjusted analysis, women with no formal education/primary education remained at higher risk of unplanned pregnancy (AOR=11.56, 95%CI: 1.918-69.721, p=0.008). Christian women had lower risk of unplanned pregnancy when compared to Muslims (AOR=0.07, 95%CI: 0.009-2.580, p=0.012). Married women who experienced an abortion or miscarried were at lower risk of unplanned pregnancy (AOR=0.12, 95%CI: 0.031-0.465, p=0.002).

Conclusion: The prevalence of unplanned pregnancy was high among married women hence efforts should be put into places targeting this group.

Keywords

Magnitude; Married women; Predictors; Rwanda; Unplanned pregnancy

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Introduction

Unplanned pregnancy is the pregnancy that is reported to be unwanted (no more child was desired) or mistimed (occurred earlier than desired). It's well known that unplanned pregnancy can result from not using or incorrect use of contraceptive methods [1]. Globally, 44% of pregnancies were unplanned in 2010-2014. In developing regions, the unintended pregnancy rate fell 16%, from 77 per 1000 to 65 per 1000 women aged 15-44 years [2]. The highest regional rate of unplanned pregnancy was observed in Africa [3].

Unplanned pregnancy is an important cause of maternal death as they can lead to ill health during pregnancy and perinatal complications [4]. It has been estimated that every day, 1,600 women and more than 10,000 newborns babies die from complications that could be prevented during pregnancy and childbirth in which a large proportion (~ 50%) of such pregnancies are unplanned and about 25% are definitely unwanted and almost 99% of these maternal and 90% of neonatal deaths occur in the developing countries. The low availability and low use of contraception continue to be the main factor influencing the prevalence of unplanned pregnancy and it is linked to poor access to reproductive health services, gender norms and sexual abuse or coercion [5].

Rwanda demographic health survey showed that 47% of married women do not want any more children, 39% want to delay their next birth. However, only 53% of married women use family planning methods and 19% have an unmet need for family planning [6]. The annual rate of unplanned pregnancy in Rwanda is 114 pregnancies per 1,000 women aged 15-44 [7]. Like in many other African countries, in Rwanda social culture context women are supposed to give birth in order to have value in the society regardless the woman's preference. According to the Rwanda cultural context and legal framework induced abortion is still far to be accepted and implemented to act as preventive measure of unplanned pregnancy, particularly for married women. To our knowledge, this is the first study conducted in Rwanda which investigated the determinants of unplanned pregnancy among married women.

Methodology

Design, setting and study participants

This was a cross-sectional descriptive study aimed at determining the magnitude and predictors of unplanned pregnancy among women attending antenatal care in Kicukiro district, Rwanda. The study participants were recruited from four health centers located in Kicukiro District from July to September 2018. A total of 383 pregnant married women aged 21-49 years who attended antenatal checkup were enrolled in the study. The legal minimum age to be married in Rwanda is 21, therefore before enrolment; the respondent was asked whether she is legally married. Study subjects were randomly selected until the sample size is attained. Women with no legal married status were excluded from the study. The sample size was determined using single proportion formula (Fisher's et al.: $N=(Z^2 \cdot P \cdot Q)/\varepsilon^2$), with P=47% (the national proportion of unwanted pregnancy 47%) [7].

Ethical consideration

Approval of data collection was obtained from Mount Kenya

University Ethical review committee. The participation was voluntary; confidentiality and anonymity were assured by not mentioning names on the questionnaires and the questionnaire was kept with precaution so that no one else had accessed the information except those involved in the study.

Data collection

An interview-administrated structured questionnaire composed of socio-demographic and economic variables such age, occupation; educational attainment, social class category, reproductive history and parity, gestation, current use of family planning, the decision on family planning whether it is woman alone, husband alone or both. We also assessed whether the pregnancy was planned at the right time, mistimed (coming before the desired time) or unwanted (no pregnancy desired at all). The researchers collected data on the days of antenatal care after explaining to mothers the purpose and process of the study. They were interviewed in a private room of the health centers.

Data analysis

Data were cleaned, coded and entered into SPSS version 20 for analysis. The prevalence of unplanned pregnancy was determined using frequency and percentage. For determinants of unplanned pregnancy logistic regression was performed. Unadjusted and adjusted odd ratios with 95% confidence interval were computed. Variables with p-value <0.05 were considered as determinants of unplanned pregnancy.
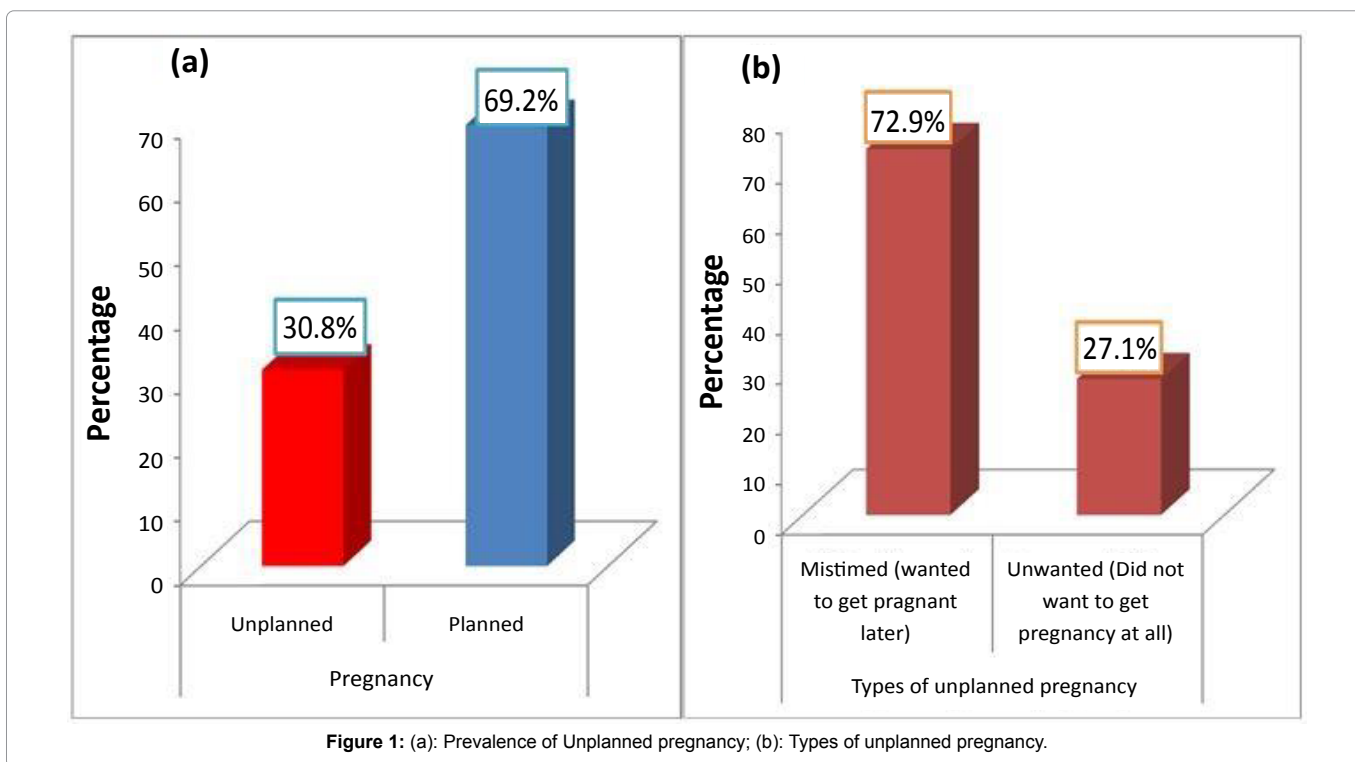
Results

Sample characteristics

A total of 383 married women participated in the study. Out of the total, more than half (58.5%) were aged 25-34 years, most (67.4%) got married at the age of 15-24 years and the highest percentage (37.1%) were married for 5 years and less. Majority of the respondents (62.1%) and their partners (63.2%) had lower education level and 58.5% were in social class category of one and two. A large percentage (94.8%) of respondents was Christian and considerable percentage (65.8%) was housewives. Regarding family decision-making style, 80.7% had mutual agreement. Most of the respondents (90.1%) desired to have between 2 and 4 children and 59.8% of them had one child. About one fifth (19.6%) had experienced abortion or miscarriage (Table 1).

The prevalence of unplanned pregnancy

As shown in Figure 1a and 1b, respondents were asked whether the current pregnancy was planned or not and the findings reveal that 118 (30.8%) did not plan for the pregnancy. Of 118 married women

Table 1: Characteristics of the sample.

Variables	Description	Frequency (n=383)	Percentage (%)
Respondent age (in years)	15-24	126	32.9
	25-34	224	58.5
	≥ 35	33	8.6
Age at marriage (in years)	15-24	258	67.4
	≥ 25	125	32.6
Duration in Marriage	0-5 years	142	37.1
	6-10 years	116	30.3
	≥ 11 years	125	32.6
Respondent education's level	No formal education/Primary	238	62.1
	Secondary and above	145	37.9
Socio-class category	Category 1and 2	224	58.5
	Category 3	189	41.5
Respondent religion	Christian	363	94.8
	Muslims	20	5.2
Respondent occupation	Housewife	252	65.8
	Self-employed	98	25.6
	Government employee	20	5.2
	Private employee	13	3.4
Decision making style	Husband decides	74	19.3
	Mutual agreement	309	80.7
Partner Education level	No formal education/Primary	242	63.2
	Secondary and above	141	36.8
Family monthly income (In Rwandan Francs)	0-50,000	208	54.3
	51,000-100,000	121	31.6
	>100,000	54	14.1
Number of current live children	None	109	28.5
	1	229	59.8
	2-4	23	6
	≥ 5	22	5.7
Number of children desired	2-4	345	90.1
	5 and above	38	9.9
Experienced abortion/miscarriage	Yes	75	19.6
	No	308	80.4

Figure 1: (a): Prevalence of Unplanned pregnancy; (b): Types of unplanned pregnancy.

with an unplanned pregnancy, 72.9% were mistimed while 27.1% were unwanted pregnancy.

Predictors of unplanned pregnancy

To determine the predictors of unplanned pregnancy, both crude and adjusted odd ratios were estimated. During unadjusted analysis, the findings showed that married women who got married between 15-24 years old, being married for more than 11 years, no formal education or primary education, lower family income (less than 100,000 Rwandan francs), married women with only one current living child, desire of few children were associated with higher risk of unplanned pregnancy. In adjusted analysis, women with no formal education/primary education remained at higher risk of unplanned pregnancy (AOR=11.56, 95%CI: 1.918-69.721, p=0.008). Christian women had lower risk of unplanned pregnancy when compared to Muslims (AOR=0.07, 95%CI: 0.009-2.580, p=0.012). Married women with no current live children were less likely to experience unplanned pregnancy (AOR=0.02, 95%CI: 0.001-0.529, p=0.019). Married women who experienced an abortion or miscarried were at lower risk of unplanned pregnancy (AOR=0.12, 95%CI: 0.031-0.465, p=0.002) (Table 2).

Discussion

This study investigated the magnitude and predictors of unplanned pregnancy among married women a group of women which to our knowledge was not emphasized during previous studies. This study showed that 30.8% of the sample had unplanned pregnancy with the majority having mistimed the pregnancy (72.9%). This prevalence is 16.2% lower the Rwandan nation prevalence of 47% [7]. This might be explained by the successful work done by community health workers in Rwanda, where they mobilize the community on the proper use contraceptives. Another reason could be accessibility and availability

of family planning, as there has been remarkable improvement in Rwanda Health System.

A study conducted in Ethiopia in 2016 found the prevalence of unplanned pregnancy of 36.4% [8]. The prevalence reported in our study is higher than that of Nairobi in 2013 of 24% [9], almost similar to the prevalence of 34% from Ethiopia among married women [10] suggesting our study findings are reliable. The inconstant results on the prevalence of unplanned pregnancy observed in our study compared to previous studies can be explained that the study population in this study was limited legally married women only while many previous studies include all reproductive-age women.

The main predictor of unplanned pregnancy among married women was lower education level where women with no formal / primary education were at high risk of unplanned pregnancy this is consistent with different previous studies where young low education was found to be associated with unplanned pregnancy [11] and in Nepal, Canada [12,13] and in South Africa [14]. This can be explained that women with low level of education are not familiar with proper utilization of family planning. Additionally, lower educated women do not have power to decide about the number of children they want, as they always depend socio-economically on their husbands.

Christian women had a lower risk of unplanned pregnancy when compared to Muslims. This finding is supported by previous studies conducted in India, which revealed that both unwanted and mistimed pregnancies are high among Muslims women [15]. Married women with no current live children were less likely to experience unplanned pregnancy and this is similar with a study in South Africa where having one child or five to seven children was associated with unplanned pregnancy [14]. Married women who experienced an abortion or miscarried were at lower risk of unplanned pregnancy this might be due to the felt need of child after abortion in the Rwandan sociocultural context.

Table 2: Predictors of unplanned pregnancy among married women.

	COR	95% CI	p-value	AOR	95%CI	p-value
Respondents age (in years)						
15-24	1.74	0.754-4.085	0.192	5.71	0.772-42.292	0.088
25-34	0.95	0.419-2.169	0.91	0.72	0.093-5.577	0.754
≥ 35	Ref					
Age at marriage (in years)						
15-24	4.08	2.313-7.221	<0.001	0.82	0.333-2.059	0.684
≥ 25	Ref					
Duration of marriage						
0-5 years	Ref					
6-10 years	1.98	1.125-3.496	0.018	1.12	0.260-4.873	0.874
≥ 11 years	2.9	1.681-5.003	<0.001	3.01	0.990-9.152	0.052
Women's education level						
No formal education/primary	3.78	2.242-6.373	<0.001	11.56	1.918-69.721	0.008
Secondary and above	Ref					
Social class category						
Category 1 and 2	0.67	0.432-1.037	0.073	1.11	0.485-2.580	0.793
Category 3	Ref					
Respondents religion						
Christian	1.35	0.481-3.822	0.565	0.07	0.009-0.563	0.012
Muslims	Ref					
Respondent occupation						
Housewife	0.92	0.410-2.097	0.855	0.71	0.221-2.333	0.582
Self-employed	2.17	0.916-5.152	0.078	2.62	0.657-10.460	0.172
Government/Private institution employee	Ref					
Partner Education level						
No formal education/Primary	2.89	1.750-4.793	<0.001	2.32	0.488-11.018	0.29
Secondary and above	Ref					
Family monthly income (In Rwanda Francs)						
0-50,000	2.98	1.279-6.960	0.011	2.52	0.492-12.914	0.267
51,000-100,000	4.26	1.779-10.221	0.001	2.49	0.509-12.233	0.26
>100,000	Ref					
Number of current live children						
None	0.36	0.085-1.604	0.184	0.02	0.001-0.529	0.019
1	4.91	1.413-17.056	0.012	1.23	0.053-28.839	0.897
2-4	4.07	0.929-17.846	0.063	1.31	0.135-12.755	0.814
≥ 5	Ref					
Number of children desired						
2-4	4.19	1.453-12.108	0.008	3.2	0.408-25.146	0.268
5 and above	Ref					
Experienced abortion/Miscarriage						
Yes	0.65	0.367-1.174	0.156	0.12	0.031-0.465	0.002
No	Ref					

Conclusion

Unplanned pregnancy of 30.8% is a great magnitude among married women and sensitization should be done for the general population to alleviate cultures patterns that should bind married women and families in general on the idea of producing children without limit. Low education attainment, religion, having many children, and experienced abortion were major determinants of unplanned pregnancy among married women aged 21-49. Reproductive health interventions should target couples with low education to raise their awareness of the components of reproductive health.

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