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Partner's profile and unmet need for child limiting among women living with HIV in Ibadan, Nigeria

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Abstract

Introduction: In many African countries, the success of secondary prevention among reproductive-age women living with HIV (WLH) is affected by unmet need for family planning and marital contexts. The influence of the latter has not received adequate attention, especially among WLH. This study describes the level of unmet need for child limiting and the effects of partner's characteristics among childbearing WLH in Ibadan, South-West, Nigeria.

Material and methods: A cross-sectional study was conducted among married women of childbearing age attending antiretroviral treatment clinic, University College Hospital, Ibadan between November and December 2015. Data were analyzed using descriptive statistics and generalized linear models.

Results: Of 781 women, 171 (21.9%) had unmet need for child limiting, while 14.2% and 45.7% have partners who were unemployed and in unskilled occupation, respectively. Controlling for partner's characteristics, socio-economic and demographic variables, having a partner who is unemployed (OR = 3.51; 95% CI: 1.71-7.21), and unknown HIV status (OR = 2.09; 95% CI: 1.20-3.62), significantly increased odds of unmet need. Age between 45 and 49 years (OR = 4.34; 95% CI: 1.36-13.90), Christianity (OR = 1.75; 95% CI: 1.06-2.87), earning <= minimum wage (OR = 1.72; 95% CI: 1.07-2.76), and having more than two children ever born were also significant factors associated with unmet need.

Conclusions: HIV care and treatment programs require innovative approaches to promote partner's testing and economic empowerment of WLH to reduce the level of unmet need for child limiting among reproductive-age women living with HIV.

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Key words: unmet need, HIV, child-limiting, family planning, marital contexts.

Introduction

Spurred by appreciable progress on human immunodeficiency virus (HIV) prevention in the past few years, the global community is currently pursuing a vision of three zeros (zero new HIV infections, zero discrimination, and zero acquired immunodeficiency syndrome [AIDS]-related deaths) by the year 2030 [1]. In the spirit of equity and the quest to leave no one behind, some countries will continue to need special attention in the global fight against

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HIV. For instance, about 60% and 54% of new infections and AIDS-related deaths, respectively, occurred in three countries (Cameroon, Cote d'Ivoire, and Nigeria) each year [2].

Nigeria's AIDS indicator and impact survey (NAIIS) estimated the prevalence of HIV to be 1.4%, implying that 1.9 million people are living with HIV, of which about 130 thousand people are newly infected, in addition to 3.0% of prevalence among pregnant women attending antenatal clinic [2, 3]. Access to highly active antiretroviral therapy (ART) and reproductive health services, such as contraceptives, would play a key role in achieving the 'three zeros' as well as sustainable development goals (SDGs) 3 (good health wellbeing for all) and 10 (reduced inequality) [2, 4]. Recent updates show that 33% of all people living with HIV have access to ART in Nigeria [5]. Among women, the improved access to ART is likely to be associated with increase in sexual activity, because the people would feel healthier and stronger. Some studies have shown that fertility desire increases with better access to ART [6], while some other studies showed otherwise [7]. However, the relationship between ART access and fertility behavior is most likely to depend on socio-cultural context, such that a strong positive association is more predominant in high fertility settings, including Nigeria [8-10].

Consequently, the level of unmet need for family planning (FP) is likely to be high among women living with HIV. A woman is said to have an unmet need for contraception, if she currently do not use any method of contraception and do not want more children. Women, who are not currently using a contraceptive method and intend to have a space of at least two years before the next birth, are regarded as having 'unmet need for spacing'. Women, who are not currently using a method of contraception and intend to stop childbearing, are regarded as having 'unmet need for limiting' [11]. One of the consequences of unmet need for FP is unintended pregnancy. Prevention of unintended pregnancy among women living with HIV is a means of preventing mother-to-child transmission of HIV (MTCH), and thereby eliminating new HIV infection and promoting health of HIV-positive women. Globally, 12.3% of women have unmet need for contraception, with 214 million women in developing regions being affected in 2017 [12]. Although, the level of unmet need among women living with HIV varied widely in many SSA countries, the associated factors are similar [4, 13]. For instance, the unmet need for contraceptive among women living with HIV in Ghana was 27.8%, while Ethiopia study reported 19.1% (13.2% for spacing and 5.9% for limiting) [14, 15]. A study from Nigeria found that 49% of women living with HIV have unmet need for contraceptive, while another study conducted in the South-West region revealed 21% (15% for spacing and 6% for limiting). Unmet need among women living with HIV was found to be as high as 50% in South Africa and 63.9% in Kenya [16]. Reported factors associated with unmet need for contraceptives among HIV-positive women consists of demographic characteristics, such as older age (35 years and older), having three or more living children, unmarried women, poor women, uneducated women, and those with poor knowledge of contraceptives [17]. There are studies conducted to unveil the prevalence and associated factors of unmet needs for contraception, but only few have looked at how partner's characteristics, such as partner's work, HIV status, and education, affect unmet needs for contraception. Meanwhile, several studies have shown that partners are very critical to success of family planning uptake, especially in many SSA settings, where reproductive decision-making are male-dominated [17].

Among women living with HIV, the marriage dynamics is peculiar because quite a number of such women are in higher order marriages, having lost their previous spouses to death or divorce [18, 19]. Some of these remarried women are often not interested in childbearing but just to be recognized as been in conjugal relationship with a man [20, 21]. Therefore, the role of partner-related factors in unmet need for child limiting deserves further exploration. Another reason for the relevance of the current study is the fact that marital relationship varies across socio-cultural settings. Therefore, findings about a few variables on partner's characteristics identified in previous studies may differ in other studies contexts. To shed more light on this important discourse, we investigated the level of unmet need for child limiting and the role of partners' characteristics among women living with HIV in Ibadan, South-West Nigeria.

Material and methods

Study design and setting

The study was a retrospective analysis of data obtained from a cross-sectional study, based on childbearing progression and proximate determinants of fertility among HIV-positive women in South-West Nigeria.

This study was carried out between November and December 2015 at antiretroviral (ART) clinic, University College Hospital (UCH), Ibadan, Nigeria. The UCH is a tertiary health facility in Nigeria that provides health services to patients across the South-West region. Detailed information on healthcare services and procedures at the study site has been documented earlier [22].

Study population and sampling methods

The study population consisted of 933 women aged 18-49 years who were HIV-positive, and had received care and treatment for at least one year from the UCH ART clinic. After the scheduled regular patients' education sessions, in which information about the study was provided to all clinic attendees, a nurse/ counselors advised eligible consenting women to participate. A simple random sampling technique was employed to select consenting women who were eligible for the study from the daily attendance register (sampling frame) at the clinic. Fifty secret ballots labeled 'Yes' or 'No' were prepared, of which, 25 were labeled 'Yes'

and anyone with a 'Yes' was recruited for the study. Trained female research assistants were employed for the data collection using pre-tested structured questionnaire. The questionnaire included sections on socio-demographic characteristics, reproductive history, contraceptive knowledge and use, marital relationship, and HIV care and treatment.

For this paper, we focused on 781 married women who had heard and knew about contraceptives/ family planning methods, excluding pregnant women.

Study variables

The outcome of interest was unmet need for child limiting, derived from two questions: current contraceptive use and desire for more children. Women who were not using any contraceptive method and did not wanted more children were categorized as having unmet need for child limiting. Unmet need was coded 'Yes" (1) and otherwise, 'No' (0).

Choice of explanatory variables was informed by the literature on unmet need for contraceptives [23]. The key independent variables were women partner's characteristics, included partner's education, occupation, family type, remarriage status, HIV status and ART status disclosure. Women who have married two or more times were categorized as 'remarried'. Other participants' background characteristics, such as current age, educational attainment, occupation, employment, income, religion, ethnicity, parity, last sexual encounter, HIV duration, ART use, and ART duration were included as control variables.

Data analysis

At the univariate stage, prevalence of unmet need was determined using frequencies and percentages. χ^2 (or independent *t*-test as appropriate) was used to examine the association between unmet need for child limiting and covariates, such as participants' characteristics and partner's profile. Variables that turned out to be significant at 10% significance level in the bivariate analysis were included in multivariable model. At the multivariate stage, the multiple logistic regression models were fitted. Model 1 included partner characteristics, while model 2 comprised participants characteristics. To identify independent factors associated with unmet need, variables with p-values less than 0.1 in models 1 and 2 were subsequently included in model 3. Measures of effect were presented as odds ratio with 95% confidence interval (95% CI).

Ethical approval

For this study, ethical approval was obtained from the University of Ibadan/ University College Hospital institutional review committee, with approval number: UI/EC/15/0230. All participants provided an informed consent to participate in the study; they were fully informed about their freedom to withdraw from the study at any point.

Every tenet of the Helsinki Declaration and other ethical requirements were strictly complied with throughout the study. No identifying information was collected from participants, and study questionnaires were accessible to only investigators and authorized research staff.

Results

Demographic and fertility profile of study participants

The participants background characteristics are presented in Table 1 and their partners' characteristics are showed in Table 2. The women mean age was 38 ± 6.10 years and ART duration lasted for 6.5 ± 3.40 years. The prevalence of unmet need for child limiting was 21.9%. Majority of the women used ART (98.7%), had sexual intercourse more than a year ago (78.2%), were Yoruba (98.7%), and Christians (61.6%). Nearly half attained secondary education (47.1%) and had more than 3 children ever born (47.0%). Even though most women were working (91.2%), 63.5% were unskilled. Most women had partners with secondary education (48.1%), positive HIV status (48.7%), disclosed HIV status (80.4%), and had polygamous partners (66.9%).

Distributions and independent factors associated with unmet need for child limiting

One hundred and seventy-one women (21.9%) had unmet need for child limiting. Bivariate association between unmet need for child limiting and women's characteristics and their partners profile is presented in Tables 3 and 4, respectively. The mean HIV duration among women who had unmet need was 0.2 ± 0.41 years compared to those without unmet need (6.5 ± 3.4) ($p < 0.001$). Women age, education, income, parity, and last sexual encounter were independently associated with unmet need for child limiting ($p < 0.05$). Older age and higher parity was significantly associated with higher prevalence of unmet need (Table 3). Most women having unmet need for child limiting were aged ≥ 45 years (44.7%), attained primary education (30.9%), had income less than minimum wage (25.2%), more than six children ever born (50.0%), and last sexual intercourse more than a year ago (25.4%). Considering partners profile, unmet need for child limiting were independently related to partners education, occupation, HIV status, and HIV status disclosure ($p < 0.05$) (Table 4). Most women with unmet need for child limiting had partners who were unemployed (46.9%) had attained primary education (38.2%), unknown HIV status (36.7%), and HIV status undisclosed (36.4%).

Correlates of unmet need for child limiting

In a multivariate analysis (Table 5), model 1 shows that partner's occupation and HIV status remained significantly

Table 1. Frequency distribution of unmet need for child limiting and socio-demographic characteristics among reproductive-age women living with HIV, University College Hospital, Ibadan, Nigeria, 2015

Variables	*n* (%)
Unmet need for child limiting	
No unmet need	610 (78.1)
Unmet need	171 (21.9)
Age mean (SD)	38.06 (6.1)
Age, years	
≤ 29	65 (8.3)
30-34	147 (18.8)
35-39	228 (29.2)
40-44	209 (26.8)
45-49	132 (16.9)
Years of HIV, mean (SD)	6.45 (3.4)
ART use	
Yes	771 (98.7)
No	10 (1.3)
ART duration, years	
≤ 2	132 (17.3)
3-5	283 (37.1)
6-8	210 (27.6)
≥ 9	137 (18.0)
Ethnicity	
Yoruba	636 (81.4)
Igbo	65 (8.3)
Other	80 (10.2)
Educational level	
None	44 (5.6)
Primary	162 (20.7)
Secondary	368 (47.1)
Higher	207 (26.5)
Religion	
Christianity	481 (61.6)
Islam	300 (38.4)
Employment	
Working	712 (91.2)
Not working	69 (8.8)
Occupation	
Professional	102 (13.1)
Skilled	116 (14.9)
Unskilled	496 (63.5)
Unemployed	67 (8.6)
Income	
≤ Minimum wage	413 (52.9)
> Minimum wage	368 (47.1)
Child ever born	
1-2	282 (36.1)
3-4	367 (47.0)
5-6	118 (15.1)
≥ 7	14 (1.8)
Last sexual encounter, years	
≤ 1	170 (21.8)
> 1	611 (78.2)

Table 2. Distribution of partner's characteristics of reproductive-age women living with HIV, University College Hospital, Ibadan, Nigeria, 2015

Variables	*n* (%)
Partner education	
None	29 (3.8)
Primary	76 (9.8)
Secondary	371 (48.1)
Higher	296 (38.3)
Partner's occupation	
Professional	217 (27.9)
Skilled	96 (12.3)
Unskilled	357 (45.7)
Unemployed	111 (14.2)
Partner's HIV status	
Positive	224 (37.1)
Negative	380 (62.9)
Unknown	177 (22.7)
Family type	
Polygamy	252 (33.1)
Monogamy	510 (66.9)
Remarriage status	
Not remarried	632 (81.7)
Remarried	142 (18.4)
Disclosure of HIV status to partners	
Disclosed	618 (80.4)
Not disclosed	151 (19.6)

associated with unmet need for child limiting, after controlling for other partner's profile. For instance, women who had unemployed partners (OR: 3.82; 95% CI: 1.90-7.72) were about four times more likely to have unmet need for child limiting compared to their counterparts who had professional partners. Similarly, women whose partners HIV statuses were unknown (OR: 1.82; 95% CI: 1.05-3.16)

Table 3. Bivariate relationships between selected characteristics and unmet need for child limiting

Variables	Unmet need, *n* (%)	Test statistics	*p*-value
Age, years			
≤ 29	6 (9.2)	59.88	< 0.001*
30-34	15 (10.2)		
35-39	42 (18.42)		
40-44	49 (23.4)		
45-49	59 (44.7)		
Years of HIV, mean (SD)	0.2 (0.41)	–50.91	< 0.001*
ART duration, years			
≤ 2	26 (19.7)	0.81	0.948
3-5	61 (21.6)		
6-8	47 (22.4)		
≥ 9	33 (24.1)		
Ethnicity			
Yoruba	134 (21.1)	1.42	0.491
Igbo	16 (24.6)		
Other	21 (26.3)		
Educational level			
None	12 (27.3)	11.41	0.01*
Primary	50 (30.86)		
Secondary	68 (18.5)		
Higher	41 (19.8)		
Religion			
Christianity	115 (23.9)	2.97	0.085
Islam	56 (18.7)		
Employment			
Working	162 (22.8)	3.47	0.063
Not working	9 (13.0)		
Occupation			
Professional	22 (21.6)	3.53	0.316
Skilled	29 (25.0)		
Unskilled	111 (22.4)		
Unemployed	9 (13.4)		
Income			
≤ minimum wage	104 (25.2)	5.54	0.019
> minimum wage	67 (18.2)		
Child ever born			
1-2	30 (10.6)	42.47	< 0.001*
3-4	92 (25.1)		
5-6	42 (35.6)		
≥ 7	7 (50.0)		
Last sexual encounter, years			
≤ 1	16 (9.4)	19.8	< 0.001*
> 1	155 (25.4)		

**p < 0.1, **p < 0.05*

Table 4. Bivariate relationships between partner's profile and unmet need for child limiting

Variables	Unmet need, *n* (%)	Test statistics	*p*-value
Partner's education			
None	8 (27.6)	17.29	0.001*
Primary	29 (38.2)		
Secondary	83 (22.4)		
Higher	49 (16.6)		
Partner's occupation			
Professional	32 (14.8)	50.33	< 0.001*
Skilled	14 (14.6)		
Unskilled	73 (20.5)		
Unemployed	52 (46.9)		
Partner's HIV status			
Positive	53 (23.7)	9.19	0.002*
Negative	53 (13.9)		
Unknown	65 (36.7)		
Family type			
Polygamy	63 (25.0)	1.91	0.167
Monogamy	105 (20.6)		
Remarriage status			
Not remarried	142 (22.5)	0.51	0.474
Remarried	28 (19.7)		
Partner's disclosure of HIV status			
Disclosed	113 (18.3)	23.39	< 0.001*
Not disclosed	55 (36.4)		

**p < 0.1, **p < 0.05*

had higher odds of unmet need for child limiting relative to those whose partners were HIV-positive.

Demographic, socio-economic, and partner's profile

Having adjusted for socio-demographic and fertility profiles in model 2, only partners' occupation and HIV status significantly influenced unmet need for child limiting among the women partner's profile considered in this study (Table 5). In particular, women who had unemployed and unknown HIV status partners, respectively, were about 25% and 85% more likely to have unmet need for child limiting. Other significant correlates of unmet need for child limiting were women's age, religion, income, parity, and sexual encounter in the last one year. For instance, women aged 45-49 years (OR: 4.34; 95% CI: 1.36-13.90) relative to age ≤ 29 years, and Christianity (OR: 1.75; 95% CI: 1.06-2.87) relative to Islam, had greater likelihood of unmet need for child limiting. Further, earning ≤ minimum wage (OR: 1.72; 95% CI: 1.07-2.76), having more than three children ever

Table 5. Models of partner's profile, demographic, and socio-economic characteristics

Variables	Model 1 OR (95%CI)	Model 2 OR (95%CI)	Model 3 OR (95%CI)
Age, years			
≤ 29		1	1
30-34		0.97 (0.34-2.71)	1.10 (0.32-3.75)
35-39		1.73 (0.67-4.45)	1.90 (0.61-5.91)
40-44		2.13 (0.83-5.51)*	2.04 (0.65-6.42)
45-49		5.48 (2.10-14.31)**	4.34 (1.36-13.90)**
Years of HIV		1.02 (0.96-1.08)	
Educational level			
None		1	
Primary		1.13 (0.51-2.53)	
Secondary		0.63 (0.29-1.36)	
Higher		0.87 (0.37-2.02)	
Partner's educational level			
None	1		
Primary	1.13 (0.35-3.68)		
Secondary	0.47 (0.15-1.38)		
Higher	0.54 (0.18-1.63)		
Religion			
Christianity		1	**1**
Islam		1.69 (1.13-2.53)**	1.75 (1.06-2.87)**
Employment			
Working		1.37 (0.60-3.10)	
Not working			
Partner's occupation			
Professional	1		1
Skilled	1.14 (0.52-2.48)		1.44 (0.65-3.23)
Unskilled	1.12 (0.61-2.02)		1.23 (0.70 - 2.17)
Unemployed	3.82 (1.90-7.72)**		3.51 (1.71-7.21)**
Income			
≤ minimum wage		1.40 (0.92-2.14)*	1.72 (1.07-2.76)**
> minimum wage		1	1
Child ever born			
1-2		1	1
3-4		2.15 (1.34-3.46)**	2.05 (1.16-3.64)**
5-6		3.20 (1.78-5.74)**	2.31 (1.09-4.90)**
≥ 7		3.82 (1.16-12.61)**	3.21 (0.67-14.49)
Last sexual encounter, years			
≤ 1		1	1
> 1		2.93 (1.65-5.21)**	2.05 (1.07-3.92)**
Partner's HIV status			
Positive	1		1
Negative	0.71 (0.45-1.13)		0.89 (0.55-1.43)
Unknown	1.82 (1.05-3.16)**		1.85 (1.03-3.32)**

Table 5. Cont.

Variables	Model 1 OR (95%CI)	Model 2 OR (95%CI)	Model 3 OR (95%CI)
Family type			
Polygamy	1.04 (0.69-1.56)		
Monogamy	1		
Remarriage status			
Not remarried	1.89 (0.92-3.86)*		1.89 (0.92-3.87)*
Remarried	1		1
Partner's disclosure of HIV status			
Disclosed	1		1
Not disclosed	1.46 (0.87-2.44)		1.66 (0.96-2.86)*

*$p < 0.1$, **$p < 0.05$

born, and sexual intercourse more than a year ago (OR: 2.05; 95% CI: 1.07-3.92), increased the odds of unmet need for child limiting.

Discussion

In this paper, we examined net effects of partner's profile on the unmet need for child limiting after accounting for demographic, socio-economic, and fertility characteristics among women living with HIV in South-West Nigeria. We found a high prevalence of unmet need for child limiting in this study. About one in every five women receiving ART had unmet need for child limiting. Previous study [24] that was conducted in South-West Nigeria, revealed a similar prevalence of 20% of non-use of contraceptives among women who did not desire more children. However, this is higher compared to 9% and 15% prevalence found in neighboring countries [25, 26] and other sub-Saharan Africa countries [27]. Partner's occupation and HIV status were identified as important partner's profile that strongly influenced unmet need for child limiting in this study. Other characteristics identified to be associated with unmet need for child limiting among women living with HIV included age, religion, income, parity, and sexual encounter in the last one year.

We found that women with unemployed partners and those who earn less than the minimum wage (18,000 naira) were more likely to have unmet need. This was similar to findings in Pakistan [28]. These two issues are related to poverty. However, it could have been unexpected that partner's unemployment is related to unmet need for child limiting in a place such as Southwestern Nigeria, where family planning is often advertised in the news media as free. Our results imply that there are deeper poverty-related factors that go beyond free supply of FP commodities. For instance, some health facilities charges the fees before FP service is provided and this discourage some women, especially the rural and urban poor. Even in places where they are really free, some clients still complain about lack of money for transportation to health facility [17]. This is complicated by the fact that HIV on its own is associated with poverty. These issues are critical for SDG on good health and wellbeing as well as reduced inequality. To achieve these SDGs and improve access to FP services among poor women, mobile FP programs may be tried as it is done for childhoods' vaccinations. This may be a strategy to create demand for FP services. Alternatively, this is one major reason why the idea about integration of HIV and reproductive health, including FP services becomes relevant. HIV care and treatment is free, and women do go for their clinic's appointments. If FP services are provided at the same time without any user-fee or other barriers, then the level of unmet need may decrease.

The implications of unknown partner's status for unmet need and secondary prevention of HIV should be a matter of concern for stakeholders. Women whose partner's HIV status are unknown would be in a great dilemma about the risk of infecting their partners, becoming re-infected with other strains of HIV, and getting pregnant with associated risk of mother-to-child transmission. Underlining this issue is stigma and discrimination, which has reduced, but still prevalent in Nigeria [22]. It is of upmost importance that partner's testing needs to be improved. One of the strategic goals of UNAIDS is zero discrimination; if this can be achieved, the fear surrounding partner's HIV testing would decrease. Ultimately, the multiplier effect on contraceptives uptake by women can also be positively addressed.

Consistent with previous study [23], our results revealed that older women or those having more than two children were more likely to experience unmet need. The relationship between advanced reproductive-age (40 years and above) and unmet need for child limiting is not surprising, because most of these women would have almost completed their family size. Therefore, childbearing desire would be lesser. In fact, this is not peculiar to women living with HIV since previous studies in general population revealed similar patterns [23]. This result indicates that contraceptive needs of women in advanced reproductive ages need attention, especially those living with HIV. This is a necessary intervention to reduce the risk and negative outcomes associated with unwanted/unplanned pregnancy in advanced age.

The fact that women with three or more children were more likely of unmet need, suggest a desire to limit family size to 3 children. The average number of children desired by women in South-West Nigeria is 4 [13]. The rural-urban disaggregation is unknown, but the level in urban areas is likely to be very close to that reported among women living with HIV in this study. The South-West region has the lowest fertility level in Nigeria, so this pattern is expected. Programmatic efforts to fill gaps in contraceptives' supply can help to accelerate the fertility transition in this sub-region of Nigeria both for the general population and women living with HIV.

Our results showed that Christians were more likely than Muslims to have unmet need for child limiting. Other studies have also shown that contraceptives' uptake tend to be higher among Christians [29]. Religion was also reported in a study conducted in Ethiopia [30]. The role of religion in contraceptive ideation and uptake is important. Findings from an interventional study in some parts of Nigeria suggest that those who hear about family planning from religions leaders are more likely to use contraceptives [31]. This has implications for family planning programming, especially the inclusion of faith-based organizations, religious leaders, and organizations. These non-public representatives played prominent roles in the fight against HIV. Therefore, for FP programs to be all-inclusive for better effectiveness, their cooperation, support, and involvement should be sought.

The limitation of this paper was its cross-sectional design, which was not capable of causal inference on determinants of unmet need. Also, the data analyzed did not have variables that could be used to explore contraceptive attitude and norms among partners of women living with HIV. In short, partners were not interviewed because the study was not conducted among couples. However, these limitations do not undermine the significant contribution to knowledge on partner's profile and other factors associated with unmet need for child limiting among women living with HIV in South-West Nigeria.

Conclusions

Unmet need for child limiting was high (22 out of 100) among women living with HIV in South-West Nigeria. Associated factors included partner's unemployment, partner's unknown HIV status, low income, advanced age (40-49 years), Christianity, and having more than two child ever born. We identified different factors that HIV and FP programs can target in order to improve contraceptive uptake, and enhance good health and wellbeing among women living with HIV. For instance, women in advanced reproductive ages and those in lower socio-economic strata need to be especially cared for. Secondly, programmatic and policy discourse are necessary for factors, such as religion, partner's HIV status, and disclosure of HIV status to partner. Integrating religious leaders into the train of awareness on uptake of contraceptive, improving employment, and income structure of Nigerians may contribute to the reduction of unmet need for child limiting in South-West Nigeria. There are future research frontiers; for instance, there are other socio-cultural and health system-related factors affecting family planning in different parts of Nigeria. In the context of HIV, these factors are even more complicated, and as such should continue to receive research attention. For example, what are the socio-cultural enablers of contraceptive uptake among men and women living with HIV and do these differ among sero-discordant couples? Lastly, apart from declining prevalence of HIV in Nigeria, there are lots of programmatic initiatives to raise the level of contraceptives' use; it will be interesting to investigate how family planning uptake among people living with HIV is affected by these interventions and the emerging epidemiological patterns of HIV in the country.

Compliance with ethical standards

Ethical approval for this study was obtained from the University of Ibadan/University College Hospital institutional review committee, with approval number of UI/EC/15/0230. All ethical standards for studies involving human subject as laid down by the University of Ibadan ethical review board, in the 1964 Declaration of Helsinki and its later amendments, and International Guidelines on HIV/AIDS and Human Rights 2006 consolidated version, were all complied with. All study participants provided an informed consent to participate in the study; they were fully informed about their freedom to withdraw from the study at any point.

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Conflict of interest

The authors have no conflict of interest.

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